INDEX.

Abbot (Mr.), the Determination of the Solar Constant, 468
Abbot (W. J. Lewis), Mammoth Skeleton, 225
Abbott (George), the Colours of Leaves, 429
Abel (O.), Bau und Geschichte der Erde, 367
Abruzzi (H.R.H. Prince Luigi Amedeo of Savoy, Duke of the), Ruwenzori: an Account of the Expedition of, F. de Filippi, Prof. J. W. Gregory, F.R.S., 281
Absorption of Light, Electrons and the, R. A. Houston, 338
Acoustics: Thermal Effects of a Musical Arc, M. La Rosa, 29, 89; the Gramophone as a Phonautograph, Prof. John G. McKendrick, F.R.S., 188
Acquired Character, the Inheritance of, Dr. Wm. Woods Smyth, 277
Acquired Characters in Plants, the Heredity of, Rev. Prof. George Henslow, 93
Actinium, the Radio-active Deposits of, S. Russ, 8
Adams (W. Poynter), Motor-car Mechanism and Management, 33
Adams (Prof. W. S.) the Rotation of the Sun, 141
Adler (E.), New Electrical Hardening Furnace, 209
Adriatic, the Shores of the, the Austrian Side, F. Hamilton Jackson, 274
Aërolite, Fall of an, in Mokoia, New Zealand, on November 26, 1908, W. F. Denning, 128
Aëronautics: the Aëro and Motor Boat Exhibition, 111; Count Zeppelin's Airship, 165; Count Zeppelin's Ascent, May 29, 405; the Royal Prussian Aëronautical Observatory's Aërological Expedition to Tropical East Africa, Profs. R. Assmann and A. Berson, 171; International Balloon Observations made by the Bavarian Meteorological Service, 199; Aërodonetics, F. W. Lanchester, Prof. G. H. Bryan, F.R.S., 221; Artificial and Natural Flight, Sir Hiram S. Maxim, Prof. G. H. Bryan, F.R.S., 221; Recent Progress in Aëronautics, Major George O. Squier, Prof. G. H. Bryan, F.R.S., 223; the Stabilisation of Aëroplanes, Étienne Maigre, Prof. G. H. Bryan, F.R.S., 223; Astronomische Ortsbestimmung im Ballon, Prof. Adolf Marcuse, Dr. William J. S. Lockyer, 244; the Government and Aëronautical Research, Prof. G. H. Bryan, F.R.S., 313; the International Commission for Scientific Aëronautics, 354; Rubber Balloons, Prof. Assmann, 354; Method of Ventilating the Instrument during Ascent, Prof. Assmann, 354; Theoretical Applications of Upper-air Observations, Prof. Bjerknes, 355; Results of Theodolite Observations on *Ballons sondes* at Trappes, Teisserenc de Bort, 355; Experiments to determine the Rate of Ascent of Rubber Balloons in Still Air, Prof. Hergesell, 355; Award of the Osiris Prize to Louis Blériot and Gabriel Voisin, 499
Aflalo (F. G.), Sunset Playgrounds: Fishing Days and Others in California and Canada, 431
Africa: the Royal Prussian Aëronautical Observatory's Aërological Expedition to Tropical East Africa, Profs. R. Assmann and A. Berson, 171; die Blütenpflanzen Afrikas, Franz Thonner, Dr. Otto Stapf, F.R.S., 333; the Ore Deposits of South Africa, J. P. Johnson, 395; Rock-engravings in South Africa, L. Péringuey, 411; Corr., R. Lydekker, 438
Agamennone (Dr. G.), Seismological Service established in Italy after the Riviera Earthquake of February 23, 1887, 438
Age, Growth, and Death, the Problem of, a Study of Cytomorphosis, Prof. Charles S. Minot, 335
Agriculture: Peat Deposits of Connecticut, 48; Scientific Aid for the British Tenant Farmer, 51; Breeding for Milk, 77; Correlations of Areas of Matured Crop and the Rainfall and Certain Allied Problems in Agriculture and Meteorology, S. M. Jacob, 89; Elementary Agricultural Chemistry, Herbert Ingle, Dr. E. J. Russell, 93; Agricultural Education, 101; Crows and Poultry, 106; Analyses of Brewers' and Distillers' Grains, Messrs. Fagan and Allan, 106; American Insect Pests, Dr. Ball, 138; Dr. Chittenden, 138; W. D. Hunter, 138; Indian Wheats, 138; Manurial Experiments on Wheat in South Australia, 198; Lucerne, 198; Some Aspects of the Wheat Problem, Dr. E. J. Russell, 282; Economic Value of Australian Pasture Grasses, F. Turner, 139; the Dry-rot of Potatoes, Sibyl Longman, 148; Black Scab or Potato-wart, Prof. T. Johnson, 179; the Powdery Scab of the Potato *Spongospora subterranea*, Prof. T. Johnson, 389; the Experimental Breeding of Indian Cottons, Part ii., on Buds and Branching, H. Martin Leake, 150; Cotton-growing in the West Indies, *West Indian Bulletin*, the Journal of the Imperial Agricultural Department for the West Indies, 164; Prickly Pear as Cattle Food, 167; the Journal of the South-eastern Agricultural College, Wye, Kent, 170; Parasites of the Cotton-worm, Mr. Jemmett, 197; Rainfall Conditions of Transvaal, Mr. Macdonald, 198; Plants Poisonous to Stock, J. Burtt-Davy, 225; Agriculture at Grenada, 286; Importation of Sugar-canes, Regulations for British Guiana, 286; Sussex Cattle, H. Rigden, 317; Effects of Nitrogen-fixing Bacteria on the Growth of Non-Leguminous Plants, Prof. W. B. Bottomley, 327; the Fertilisation of Tea, George A. Cowie, 385; Two New Parasites of the Black-currant Mite, Miss A. M. Taylor, 447; Relations between the Permeability of Soils and their Aptitude for Irrigation, A. Muntz and L. Faure, 449; Injurious Insects observed in Ireland during 1908, Prof. G. H. Carpenter, 479
Aitken (Dr. J.), a Simple Radioscope and a Radiometer for showing and measuring Radio-activity, 478
Alaska, ein Beitrag zur Geschichte nordischer Kolonisation, Prof. H. Erdmann, 121
Aldrich (L. B.), the Determination of the Solar Constant, 468
Alechin (W.), the Streletz Steppe, 500
Algæ, Fresh-water, from Burma, including a few from Bengal and Madras, W. West and G. S. West, 125
Algebra, School, W. E. Patterson, 426
Algué (Prof. José), Meteorological Conditions in the Philippine Islands, 1908, 299
Allan (Mr.), Analyses of Brewers' and Distillers' Grains, 106
Allcroft (A. Hadrian), Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, 69
Allen (H. Stanley), the Photo-electric Fatigue of Zinc, 178
Alloys and their Industrial Applications, E. F. Law, 243
Alpine and Bog Plants, Reginald Farrer, 344

200832

Alternating Circuit of Parallel Wires, the Simple Equivalent of an, Dr. J. W. Nicholson, 247
Amaftounsky (M. A.), the Constitution of the Sun, 51
America: Higher Education in the United States, 112; Physiological and Medical Observations among the Indians of South-western United States and Northern Mexico, Aleš Hrdlička, 126; the American Philosophical Society, 443; Notes of a Botanist on the Amazon and Andes, Richard Spruce, 458; American and Canadian Waterways, 461; American Philosophy, the Early Schools, Prof. J. W. Riley, 489
Amulets, Tibetan and Burmese, Dr. W. L. Hildburgh, 387
Anatomy: the Intracranial Vascular System of Sphenodon, Prof. A. Dendy, 268–9; Brains of Two White Philosophers and of Two Obscure Negroes Compared, Prof. B. G. Wilder, 443; Anatomical Results of Excavations in Nubia, Drs. G. Elliot Smith and Douglas E. Derry, 466
Ancestry of the Marsupialia, the, Prof. Jas. P. Hill, 159; the Writer of the Note, 159
André (Ch.), les Planètes et leur Origines, 274
Andrewes (Dr.), Micro-organisms Present in Sewer Air, 203
Andrewes (Ewart S.), the Theory and Design of Structures, 64
Animal World, the Transformations of the, Charles Depéret, 452
Animals at Home, W. P. Westell, 192
Anschütz (Prof. Richard), Life and Chemical Work of Archibald Scott Couper, 329
Anstey (H. C.), Applications of the Internal-combustion Engine to Marine Propulsion, 173
Antarctica: Return of the British Antarctic Expedition, 102; Lieut. Shackleton's Antarctic Expedition: (1) Explorations and Results, (2) the South Magnetic Pole, Dr. C. Chree, F.R.S., (3) Meteorological Observations, W. H. Dines, F.R.S., (4) Biological Results, 130; Scientific Achievements of British Antarctic Expedition under Lieut. Shackleton, 377; Report on the Scientific Results of the Voyage of S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, David W. Wilton, Dr. J. H. Harvie Pirie, and R. N. Rudmose Brown, vol. v., Zoology, Invertebrates, 161; National Antarctic Expedition, 1901–4, Album of Photographs and Sketches, 460; the French Antarctic Expedition, Communication from Dr. J. B. Charcot, 285
Anthropology: Reports of the Cambridge Anthropological Expedition to Torres Straits, Vol. vi., Sociology, Magic and Religion of the Eastern Islanders, 9; Curious Device for cheating Death, H. C. Brown, 48; Proportion of Sexes produced by Whites and Coloured Peoples in Cuba, Walter Heape, 57; an Imperial Bureau of Anthropology, Dr. A. C. Haddon, F.R.S., 73; Canoe Ornamental Carvings from South-eastern British New Guinea, Dr. Seligmann, 106; the Veddas, Dr. C. G. Seligmann, 119; Photographs of the Veddas of Ceylon and of their Ceremonial Dances, Dr. C. G. Seligmann, 340; Royal Anthropologial Institute, 119, 298, 359, 387; Origin of the Terms of Human Relationship, A. Lang, 139; Mountaineers of the Euphrates, E. Huntingdon, 167; German Anthropological Papers, 204; the Nuraghi of Sardinia, Dr. Duncan Mackenzie, 226; Australian Kinship, Dr. A. Lang, 247; Native Man in Southern India, E. Thurston, 257; the Blackfeet Indians of Montana, W. MacClintock, 298; the Romanichels, Bob Skot, 318; Baskets used in Repelling Demons, Kumagusu Minakata, 369; Crania and Bones from Ancient Ruins in Rhodesia, Dr. F. C. Shrubsall, 379; Tibetan and Burmese Amulets, Dr. W. L. Hildburgh, 387; Cranial Capacity of Fossil Men of the Type known as Neanderthal, Marcellin Boule, 390; der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg, Otto Schoetensack, Dr. William Wright, 398; Origin of the People of Egypt, Dr. Elliot Smith, 407; Origin of the Turkish Crescent, Prof. Ridgeway, 407; the Burning Bush and the Origin of Judaism, Prof. P. Haupt, 444; Human Skeleton discovered in Cavern of Le Moustier, Dordogne, Dr. Ludwig Reinhardt, 466; Skeleton of the Fossil Man of La Chapelle-aux-Saints, Marcellin Boule, 480; Pre-animistic Stages in Savage Religion, E. Clodd, 501; European Population of the United States, Prof. W. Z. Ripley, 501
Apiculture, Problems of, Dr. W. Malden, 356
Apnœa, the Production of Prolonged, in Man, W. G. Royal-Dawson, 8; Dr. H. M. Vernon, 39
April Meteors, John R. Henry, 188
Aquarium of the New York Zoological Society, 500
Arboriculture: Mitteilungen der deutschen dendrologischen Gesellschaft, 325
Archæology: Excavation of Celtic Rubbish-heap near Oare, Mrs. M. E. Cunnington, 17; Geographical and Archæological Explorations in Chinese Turkestan in 1906–8, Dr. M. A. Stein, 47; Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, Rev. John Griffith, 69; the Botallek Circles, Sir Norman Lockyer, K.C.B., F.R.S., 97; Canoe Ornamental Carvings from South-eastern British New Guinea, Dr. Seligmann, 106; Palæolithic Implements, &c., from Hackpen Hill, Winterbourne Bassett, Rev. H. G. O. Kendall, 118; Stone Implements of the French Older Palæolithic Age, Dr. Hugo Obermaier, 139; Handbook for Egypt and the Sudan, 155; Palæolithic Vessels of Egypt, or the Earliest Handiwork of Man, Robert de Rustafjaell, 246; the Tomb of Horemheb, Egypt, A. E. P. Weigall, 437; Memoirs of the Peabody Museum of American Archæology and Ethnology, Harvard University, Explorations in the Department of Petén, Guatemalo and Adjacent Region, T. Maler, 160; Roman Metalwork found at Deep Dale Cave, W. Turner, 198; the Nuraghi of Sardinia, Dr. Duncan Mackenzie, 226; Openings in Knap Hill Camp, Wiltshire, Mrs. M. E. Cunningham, 287; the Uses and Dates of Ancient Temples, Sir Norman Lockyer, K.C.B., F.R.S., 340; Ancient Sarcophagi used in Modern Interments, 351; Stone Circles in Ireland, A. L. Lewis, 359; Steatite Figures (Nomori), T. A. Joyce, 437; Early Civilisation in Northern Greece, Messrs. Wace, Droop, and Thomson, 437; Anatomical Results of Excavations in Nubia, Drs. G. Elliot Smith and Douglas E. Derry, 466; the Welsh Gorsedd, Rev. W. Griffith, 468; Wall-paintings of Altamira Cavern, Lotus Péralté, 501; United States National Museum Collection of Rosaries, I. M. Casanowicz, 502
Architecture: the Planning of Fever Hospitals and Disinfecting and Cleansing Stations, Albert C. Freeman, 185
Ardern (Edward), Principles of Sewage Treatment, Prof. Dunbar, 5; Sewer Construction, Prof. Henry N. Ogden, 5; Modern Methods of Sewage Disposal, W. H. Trentham and J. Saunders, 5
Armstrong (Prof. Henry E., F.R.S.), British Association, Winnipeg Meeting, 159
Ascherson (P.), das Pflanzenreich, Potamogetonaceæ, 424
Ascoli (W. S.), the Guatemalan Earthquakes and Eruption of 1902, 359
Ashworth (J. R.), Is there a Vertical Magnetic Force in a Cyclone? 40
Asia: the Morphology of Asia, 91; Dr. Sven Hedin on Central Asia, 372
Asiatic Society of Bengal, 89, 150
Aspinall (John A. F.), the Electrification of Railways, Address at Institution of Mechanical Engineers, 260
Assheton (Ric.), the Germ-layer Theory, 492
Assmann (Prof. R.), the Royal Prussian Aëronautical Observatory's Aërological Expedition to Tropical East Africa, 171; Rubber Balloons, 354; Method of Ventilating the Instrument during Ascent, 354
Association of Teachers in Technical Institutions, the, 446
Association of Technical Institutions, the Functions of Technical Colleges, Dr. George T. Beilby, F.R.S., at, 22
Astrographic Conference at Paris, the, 440
Astronomy: the Meteoric Fireball of February 22 and its Streak, W. F. Denning, 13; the Meteoric Streak of February 22, W. F. Denning, 42; Fireball of February 22, W. F. Denning, 69; the Spectra of Various Nebulæ, Prof. Wolf, 19; the Proposed Programme of Work for the Reynolds Reflector at Helwan, Egypt, Knox Shaw, 19; Our Astronomical Column, 19, 50, 79, 108, 141, 169, 200, 228, 259, 288, 320, 353, 380, 409, 430, 468, 502; Observations of Comet Tempel$_2$-Swift, Prof. Barnard, 19; Comet Temple$_2$-Swift, 1908*d*, M.M. Ramband and Sy, 79; the Levels of Sun-spots, A. W. Dobbie, 19; Sun-spots

and Solar Temperature, Mr. Evershed, 169; a New "Cave-nebula" in Cepheus, Prof. Wolf, 19; the Recent Magnitude of Nova Persei, Prof. Nijland, 19; Double-star Measures, Prof. Burnham, 19; Measures of Double Stars, Dr. Lau and Herr Luplau-Janssen, 200; Anomalous Refraction and Spectroheliograph Results, Prof. Julius, 50; the Constitution of the Sun, J. F. Hermann Schulz, 51; M. A. Amaftounsky, 51; the Rotation of the Sun, Prof. W. S. Adams, 141; Partial Eclipse of the Sun in Canada, Dr. Downing, 320; Hale's Solar Vortices, A. Brester, 79; Pressure in the Sun's Atmosphere, MM. Fabry and Buisson, 229; the Upper Layers of the Solar Atmosphere, M. Deslandres, 354; Recent Solar Researches, Prof. Ricco, 288; the Present Solar Activity, W. E. Rolston, 320; Critical Examination of the Monochromatic Images of the Sun with the Hydrogen Lines, H. Deslandres and L. d'Azambuja, 389; Unsymmetrical Enlargement of the Lines of the Arc Spectrum and their Comparison with those of the Solar Spectrum, Ch. Fabry and H. Buisson, 389; Changes in the Figure and Dimensions of the Sun, Prof. Moulton, 439; the Determination of the Solar Constant, Messrs. Abbot and Fowle, jun., L. B. Aldrich, 468; Stellar Evolution, Prof. Moulton, 79; Radial Velocity of α Persei, F. Goos, 51; a Catalogue of 1625 Southern Stars, Ernest Cooke, 51; the Melbourne Observatory, Mr. Baracchi, 51; the Cape Observatory, 79; the Botallek Circles, Sir Norman Lockyer, K.C.B., F.R.S., 97; Photographs of Morehouse's Comet, 1908*c*, Rev. Joel Metcalf, 108; Spectrum of the Comet 1908*c* (Morehouse), A. de la Baume-Pluvinel and F. Baldet, 149; Prof. Hartmann, 380; Positions of Morehouse's (1908*c*) Comet, Dr. Ebell, 169; Observations made at Meudon Observatory on Morehouse's Comet, H. Deslandres, A. Bernard, and J. Bosler, 179; Comet Morehouse, 1908*c*, Prof. F. Ristenpart, 260; Observations of, Mr. Motherwell, 200; Theory to Account for Changes in the Tail of Comet *c* 1908, Prof. E. E. Barnard, 444; Relation between the Magnitudes and Colours of Stars, Herren Müller and Kempf, 108; Colours and Magnitudes of Stars, Mr. Franks, Miss Bell, 288; Photographic Determination of the Colours of the Stars, Oesten Bergstrand, 299; a Remarkable Prominence, Father Chevalier, 108; a Treatise on Spherical Astronomy, Sir Robert Ball, F.R.S., 123; Fall of an Aërolite in Mokoia, New Zealand, on November 26, 1908, W. F. Denning, 128; Transactions of the International Union for Cooperation in Solar Research, 134; Astronomical Occurrences in April, 141; in May, 259; in June, 409; Common Motions of the Principal Ursæ Majoris Stars, Dr. Ludendorff, 141; the Surface of Rotating Mercury as a Reflecting Telescope, Prof. R. W. Wood, 141; Photographs of the Earthshine on the Moon, M. Quénisset, 141; Cosmical Matter in Space, Prof. Newall, 142; Observations of Variable Stars, Prof. Nijland, 142; Systematic Motion of the Stars, Prof. Dyson, 148; the Gases of the Ring Nebula in Lyra, Prof. Bohuslav Brauner, 158; Position of Daniel's (1907*d*) Comet, H. H. Kritzinger, 169; Recent Observations of Daniel's Comet, 1907*d*, Prof. Wolf, 410; the Apparent Dispersion of Light in Space, Prof. Lebedew, 169; Coloured Stars in the Globular Cluster M. 13, Prof. Barnard, 169; the United States Naval Observatory, 170; Astronomy of To-day, Dr. Cecil G. Dolmage, William E. Rolston, 181; April Meteors, John R. Henry, 188; International Chart of the Heavens, 193; Diameter and Position of Mercury, Prof. Stroobant, 200; Mercury as an Evening Star, 320; the Vatican Observatory, 200; a Chinese Planisphere, E. B. Knobel, 209; the 60-inch Reflecting Telescope of the Mount Wilson Observatory, California, Dr. G. W. Ritchey, 209; Royal Astronomical Society, 209, 387; Moving Force of Terrestrial and Celestial Bodies in Relation to the Attraction of Gravitation, Dr. H. Wilde, 209; Mars as the Abode of Life, Percival Lowell, 212; the "Original" Canals of the Martian Doubles, Prof. Lowell, 260; Mars, Prof. Lowell, 353; Development of Martian Canals, Prof. Lowell, 288; Halley's Comet, Mr. Crommelin, 228; the Meteoric Shower of Halley's Comet, W. F. Denning, 259; the Spectra of Nebulæ, Prof. Wolf, Dr. Eberhard, 229; Orbits of Spectroscopic Binaries, R. H. Baker, F. C. Jordan, 229; Spectroscopic Binaries, Prof. Campbell, 321; Dr. Heber D. Curtis, 321; Prof. W. H. Wright, 321; the Circularity of Planetary Orbits, Prof. T. J. J. See, 229; Astronomische Ortsbestimmung im Ballon, Prof. Adolf Marcuse, Dr. William J. S. Lockyer, 244; Persistent Trail of a Meteor on March 14, Edward J. Steer, 248; Harvard Observatory Expedition to the Elevated Plateau of South Africa, 256; Harvard College Observatory, Prof. Pickering, 321; Annals of the Astronomical Observatory of Harvard College, a Search for a Planet beyond Neptune, W. H. Pickering, 463; Chromospheric Calcium Lines in Furnace Spectra, Dr. A. S. King, 260; Mount Wilson Solar Observatory Report, Prof. Hale, 260; Determination of the Solar Parallax from Observations of Eros, Arthur R. Hinks, 270; the Solar Parallax from Observations of Eros, Prof. Perrine, 468; les Planètes et leur Origines, Ch. André, 274; the Gravitative Strain upon the Moon, Evan McLennan, 276; Sir Oliver Lodge, F.R.S., 307; Occultations of Planets, Dr. Downing, 288; SS Aurigæ (31.1907) an Irregular Variable, Prof. Hartwig, 288; a Group of Red Stars in Sagittarius, Mrs. Fleming, 288; the Calculation of Cometary Orbits, Prof. Kobold, 288; Photometric Observations at Catania, A. Bemporad, 288; the Intra-Mercurial Planet Problem, Prof. Campbell, 320; Dr. Perrine, 320; the Uses and Dates of Ancient Temples, Sir Norman Lockyer, K.C.B., F.R.S., 340; Jupiter, Prof. Lowell, 353; a Remarkable Transit of Jupiter's Third Satellite, Mr. Innes, 409; the Perturbations of Brooks's Comet (1889 V) by Jupiter in 1886, Prof. Poor, 410; G. Deutschland, 410; Spectra of some Spiral Nebulæ and Globular Star Clusters, E. A. Fath, 354; a General Solution of the Spectroheliograph, M. Deslandres, 380; the Brightness of the Corona, Prof. Perrine, 380; a Standard Scale of Photographic Magnitudes, Prof. Pickering, 380; the Origins of Satellites, Prof. See, 380; the Orbit of ξ Boötis, Prof. Doberck, 380; the Birth of Worlds, Prof. A. W. Bickerton, 380; Spectroscopic Comparison of *o* Ceti with Titanium Oxide, A. Fowler, 387; the Spectrum of Magnesium in Hydrogen, E. E. Brooks, 410; Dispersion of Light in Interstellar Space, Dr. Ch. Nordmann, 409; the Variable Star 6.1909, Ursæ Majoris, Prof. Wolf, 410; the Rings of Saturn, Prof. Levi-Civito, 439; Camera Objectives for Spectrographs, Mr. Plaskett, 440; the Astrographic Conference at Paris, 440; Solar Activity and Terrestrial Magnetic Disturbances, Dr. L. A. Bauer, 444; the Royal Observatory, Greenwich, 446; Death of Prof. Carl N. J. Börgen, 464; the Ensuing Return of the Perseid Meteors, 468; a Double Image Coelostat for determining the Moon's Position, Mr. Wade, 468; Discovery of a Comet, 1909*a*, Mr. Daniel, 502; M. Javelle, 502; Prof. Kobold, 502; M. Borrelly, 502; Elements and Ephemeris for Winnecke's Comet, 1909, Prof. Hillebrand, 502; the Recent Lunar Eclipse, June 3, MM. Borrelly and Coggia, 502; J. H. Elgie, 503; the Photoheliometer, Prof. Poor, 503; the Errors of Position of Images Photographed through Glass, Dr. Schlesinger, 503

Astrophysics: the Yielding of the Earth to Disturbing Forces, Prof. A. E. H. Love, F.R.S., at Royal Society, 252; the Gravitative Strain upon the Moon, Evan McLennan, 276; Sir Oliver Lodge, F.R.S., 307

Atkins (W. R. G.), Osmotic Pressures of the Blood and Eggs of Birds, 179

Atlantic, General Results of the Meteorological Cruises of the *Otaria* on the, in 1905, 1906 and 1907, L. Teisserenc de Bort and Prof. A. Lawrence Rotch, 219

Atlas of the Empire, an, 213

Atmosphere, Ionisation in the, Prof. A. S. Eve, 36

Atmosphere, the Isothermal Layer of the, E. Gold, 68

Atmosphere, the Upper Layers of the Solar, M. Deslandres, 354

Atmosphere, Temperature of the Upper, Dr. C. Chree, F.R.S., 127, 397; W. H. Dines, F.R.S., 455; Charles J. P. Cave, 456

Atoms, Radio-activity in Relation to Morozoff's Theory of the Constitution of, Prof. B. de Szyszkowski, 276

SS Aurigæ (31.1907) an Irregular Variable, Prof. Hartwig, 288

Austerweil (Géza), New Method of Isomerisation in the Terpene Series, 330

Australian Kinship, Dr. A. Lang, 247

Austrian Side, the, the Shores of the Adriatic, F. Hamilton Jackson, 274
Avasia (D. N.), Lac Cultivation in India, 436
Avery (Messrs. W. and T., Ltd.), New 300-ton Universal Testing Machine, 408
Aviation: Aërodonetics, F. W. Lanchester, Prof. G. H. Bryan, F.R.S., 221; Artificial and Natural Flight, Sir Hiram S. Maxim, Prof. G. H. Bryan, F.R.S., 221
Awano (S.), Power of Plants to Absorb Moisture through the Leaf Surface, 436
Azambuja (L. d'), Examination of the Upper Layers of Calcium and Hydrogen in the Solar Atmosphere and of the same Black Filaments in the Two Layers, 269; Critical Examination of the Monochromatic Images of the Sun with the Hydrogen Lines, 389

Bacot (A.), Cross-breeding of Two Races of the Moth *Acidalia virgularia*, 58
Bacteriology: Determination of a Coefficient by which the Rate of Diffusion of Stain and other Substances into Livings Cells can be Measured and by which Bacteria and Other Cells may be Differentiated, H. C. Ross, 27; Influence of Glucosides on Growth of Acid-fast Bacilli, F. W. Twort, 58; Physico-chemical Method of Sterilising in the Cold and at a Distance, A. Billon-Daguerre, 59; So-called "Sexual" Method of Forming Spores in Bacteria, C. C. Dobell, 88; Evacuation of Tubercle Bacilli by the Bile in the Intestine in Animals affected with Latent Lesions, A. Calmette and C. Guérin, 89; Micro-organisms Present in Sewer Air, Dr. Andrewes, 203; Bacterial Contamination of Milk, Dr. Savage, 203; the Bacteriology of Diphtheria, 243; Invisible Pathogenic Micro-organisms and the Physical Proofs of their Existence, A. Chauveau, 299; Effects of Nitrogen-fixing Bacteria on the Growth of Non-leguminous Plants, Prof. W. B. Bottomley, 327; Spore-formation in the Disporic Bacteria, C. Clifford Dobell, 435; Can Opsonins be Obtained directly from Bacteria and Yeast, Dr. R. Greig-Smith, 479; the Coagulation of Condensed Milk, Dr. R. Greig-Smith, 479
Bailey (E. B.), the Cauldron Subsidence of Glen Coe and the associated Igneous Phenomena, 448
Bailey (L. H.), First Course in Biology, 34
Baillehache (le Comte de), Unités Électriques, 488
Bairstow (L.), Elastic Limits of Iron and Steel under Cyclical Variations of Stress, 359
Baker (C.), Microscope Objectives of a New Formula, 320
Baker (Dr. H. Brereton, F.R.S.), the Influence of Moisture on Chemical Change, Wilde Lecture at Manchester Literary and Philosophical Society, 175
Baker (R. H.), Orbits of Spectroscopic Binaries, 229
Baldet (F.), Spectrum of the Comet 1908*c* (Morehouse), 149
Balfour (Andrew), Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, 495
Ball (Dr.), American Insect Pests, 138
Ball (Sir Robert, F.R.S.), a Treatise on Spherical Astronomy, 123
Ballistics: Flight of a Rifled Projectile in Air, Dr. J. B. Henderson, 57
Ballon, Astronomische Ortsbestimmung im, Prof. Adolf Marcuse, Dr. William J. S. Lockyer, 244
Ballou (H. A.), "Millions" and Mosquitoes, 16
Bannister (C. O.), Cupellation Experiments: the Thermal Properties of Cupels, 388
Baracchi (Mr.), the Melbourne Observatory, 51
Barbier (Ph.), Transformation of Pinonic Acid into 1 : 3-Dimethyl-4-phenylacetic Acid, 89
Barkla (Dr. C. G.), the Absorption of X-rays, 37; Ionisation by Röntgen Rays, 187; Phenomena of X-ray Transmission, 419
Barnard (Prof. E. E.), Observations of Comet Temple, Swift, 19; Coloured Stars in the Globular Cluster M 13, 169; Theory to Account for Changes in the Tail of Comet *c* 1908, 444
Barnes (H. T.), Phenomenon connected with the Discharge of Electricity from Pointed Conductors, with a Note by John Zeleny, 297
Barnes (Prof. James), a Simple Fabry and Perot Interferometer, 187
Barometric Oscillation, W. H. Dines, F.R.S., 8
Barratt (Dr. J. O. W.), Method of Estimating the Total Volume of Blood contained in the Living Body, 387
Barre (M.), Double Sulphates of Calcium, 510
Barrett (J. W.), Seal-rocks at Westernport, Bass Strait, 257
Barrett (Prof. W. F., F.R.S.), New Form of Optometer, 348; Methods of Determining the Amount of Light irregularly reflected from Rough Surfaces, 388; New Polarimeter for the Measurement of the Indices of Refraction of Opaque Bodies, 388
Baruch (Dr. M. P.), Flora von Paderborn, 105
Bashford (Dr. E. F.), Incidence of Cancer in Mice of Known Age, 387
Basic Steel, the Manufacture of, 135
Basidiomycetes, Synopsis of the British, a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, British Museum, Worthington G. Smith, 184
Baskets used in Repelling Demons, Kumagusu Minakata, 369
Baterden (J. R.), Timber, 94
Bateson (Prof. W., F.R.S.), the Method and Scope of Genetics, 396
Bau und Geschichte der Erde, O. Abel, 367
Bauer (Edmond), Radiation and Temperature of the Flame of a Bunsen Burner, 209; the Nature of Flame Spectra, 408; Preparation of the Three Oxy- and the *p*-dimethylamido and Diethylamidobenzylidenecamphors and the *p*- and *m*-tolylidenecamphors, 479
Bauer (Dr. L. A.), Solar Activity and Terrestrial Magnetic Disturbances, 444; Department of Commerce and Labour, Coast and Geodetic Survey, United States Magnetic Tables and Magnetic Charts for 1905, 293
Bauer (O.), Solubility of Steel in Sulphuric Acid, 384
Bayard (P.), a New Isomeride of Indigo, 149
Bayliss (Dr. W. M.), Osmotic Pressure of Congo Red, 320
Bāz-Nama-yi-Nāsiri, the, a Persian Treatise on Falconry, 371
Becquerel (Jean), New Type of Magnetic Decomposition of the Absorption Bands of Crystals, 209
Becquerel (Paul), the Suspension of Life in certain Seeds, 270
Bees, the "Sense of Direction" in, Gaston Bonnier, 269
Beilby (Dr. George T., F.R.S.), the Functions of Technical Colleges, Address at Association of Technical Institutions, 22
Bell (Miss), Colours and Magnitudes of Stars, 288
Bell-Marley (H. W.), Hunting the Hump-backed Whale in Natal Waters, 16
Bemmelen (Dr. W. van), Magnetic Survey of the Dutch East Indies, 1903–7, 293
Bemporad (A.), Photometric Observations at Catania, 288
Benham (Charles E.), Fluorescence of *Lignum Nephriticum*, 159; an Optical Phenomenon, 458
Benson (Dr. Margaret), Structure and Relations of the Reproductive Organs of *Heterangium Grievii*, 239
Bentley (Wilson J.), Studies of Frost and Ice Crystals, 492
Berger (A.), das Pflanzenreich, Liliaceæ-Aloineæ, 424
Berger (E.), New Method of Preparation of the β-halogen Derivatives of Naphthaline, 149
Berget (A.), Leçons de Physique générale, 6
Bergstrand (Oesten), Photographic Determination of the Colours of the Stars, 299
Berkeley (Earl of), Osmotic Pressures of Weak Solutions of Calcium Ferrocyanide, 28
Bernard (A.), Observations made at Meudon Observatory on Morehouse's Comet, 179
Bernthsen (Hofrath Prof.), Fixation of Atmospheric Nitrogen, 412
Berson (A.), the Royal Prussian Aëronautical Observatory's Aërological Expedition to Tropical East Africa, 171
Bertrand (Gabriel), Action of the Bulgarian Ferment *Yoghourt* on Various Sugars, 390
Bessel's Functions, Wave Motion and, Prof. G. H. Bryan, F.R.S., 309
Besson (A.), Action of Gaseous Hydrochloric Acid on Amorphous Silicon, 59; New Silicon Chlorides of the Silicomethane Series, 180; Action of Oxidising Agents upon Silico-chloroform, 329
Beženov (B. W.), Calendar of Algal Growth in the Bay of Sebastopol, 167

Bickerton (Prof. A. W.), the Birth of Worlds, 380
Billon-Daguerre (A.), Physico-chemical Method of Sterilising in the Cold and at a Distance, 59
Binaries, Spectroscopic, Prof. Campbell, 321; Dr. Heber D. Curtis, 321; Prof. W. H. Wright, 321; Orbits of, R. H. Baker, 229; F. C. Jordan, 229
Biochemistry: Biochemie, ein Lehrbuch für Mediziner, Zoologen und Botaniker, Dr. F. Röhmann, 6; the General Characters of the Proteins, Dr. S. B. Schryver, 307
Biology: First Course in Biology, L. H. Bailey and W. M. Coleman, 34; Parallel Paths: a Study in Biology, Ethics, and Art, T. W. Rolleston, 35; Biology and its Makers, with Portraits and other Illustrations, Prof. W. A. Locy, 95; the Cell as the Unit of Life, and other Lectures delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, Allan Macfadyen, 123; Ernst Haeckel, Prof. Walther May, 126; Lieut. Shackleton's Antarctic Expedition, Biological Results, 130; Biologia Centrali-Americana: Orthoptera, Vol. i., Dr. Henri de Saussure, Dr. Leo Zehntner, and A. Pictet, Forficulidæ, Count de Bormans, Vol. ii., Acridiidæ, Prof. Lawrence Brunner, Tettiginæ, Albert P. Morse, and Phasmidæ, Robert Shelford, 241; the Problem of Age, Growth, and Death, a Study of Cytomorphosis, Prof. Charles S. Minot, 335; zur Biologie des Chlorophylls, Laubfarbe und Himmelslicht, Vergilbung und Etiolement, Ernst Stahl, 393; the Method and Scope of Genetics, Prof. W. Bateson, F.R.S., 396; Capacity for Regeneration of One of the Brittle-stars, S. Morgulis, 465; the Germ-layer Theory, Ric. Assheton, 492; Meaning of Sexuality in Relation to the Formation of Gametes, Dr. Max Hartmann, 500; "Chemical" Embryos, 507; Marine Biology: Relations of Marine Organisms to Light, Prof. B. Moore, 16; Sex in Sea-urchins obtained by Experimental Parthenogenesis, 29; Migration of the Thread-cells of Moerisia, C. L. Boulenger, 88; Specimen of Pelagothuria from the Seychelles, J. C. Simpson, 88; some Marine and Fresh-water Organisms, 174; Müller's Ostracod Crustacean *Gigantocypris agassizi*, L. Luders, 174; Fresh-water Species of Cyclops of Long Island, Dr. Esther Brynes, 174; Gigantocypris and the *Challenger*, Dr. W. T. Calman, 248; Amphipoda Hyperiidea of the *Sealark* Expedition to the Indian Ocean, A. O. Walker, 269; Marine Mollusca of the *Sealark* Expedition, Dr. J Cosmo Melvill, 269; Pecten, W. J. Dakin, 273; Photophores in Decapoda, S. W. Kemp, 328; a Problematical Organism thrown up during a Storm in Bass Strait, Prof. Baldwin Spencer, 350; Apical Pigment-spots in the Pluteus of *Echinus miliaris*, F. H. Gravely, 359; Marine Biology in the Tortugas, 382; Annual Breeding Swarm of the Atlantic Palolo, Dr. A. G. Mayer, 382; Experiments on the Scyphomedusan *Cassiopea xamachana*, Dr. Mayer, 382; Origin of the Lung of Ampullaria, Prof. W. K. Brookes and B. McGlone, 382; Significance of the Conspicuousness of the Coral-reef Fishes of the Tortugas, Prof. Reighard, 382
Bircham (F. R. S.), Applications of the Internal-combustion Engine to Marine Propulsion, 173
Birds: Moral Superiority among Birds, A. R. Horwood, 40; the Birds of Tierra del Fuego, Richard Crawshay, 155; Bird Notes, 295; Kunst und Vogelgesang in ihren wechselseitigen Beziehungen von naturwissenschaftlich-musikalischen Standpunkte beleuchtet, Dr. B. Hoffmann, 336
Birkeland (Kr.), the Norwegian Aurora Polaris Expedition, 1902–3, Vol. i., on the Cause of Magnetic Storms and the Origin of Terrestrial Magnetism, 410
Birkeland (Prof.), Fixation of Atmospheric Nitrogen, 412
Birth of Worlds, the, Prof. A. W. Bickerton, 380
Bishop (Rev. Dr. Sereno E.), Death and Obituary Notice of, 164
Bisiker (W.), the British Empire (and Japan), 213
Bjerknes (Prof.), Theoretical Applications of Upper-air Observations, 355
Blaise (E.), Syntheses by Means of the Mixed Zinc Organometallic Derivatives, 29
Blennerhassett (Sir Rowland), Death and Obituary Notice of, 103
Blériot (Louis), Award of the Osiris Prize to, 499
Bloch (Eugène), Part played by Impurities in the Photo-electric Effect with Liquids, 89
Bloch (L.), Phosphorescence and Combustion Flames of Sulphur, 149
"Blowing" Wells, Sydney H. Long, 339; Dr. A. Strahan, F.R.S., 370; Beeby Thompson, 429
Blütenpflanzen Afrikas, die, Franz Thonner, Dr. Otto Stapf, F.R.S., 333
Boas (Dr. J. E. V.), Lehrbuch der Zoologie für Studierende, 214
Body at Work, the, Dr. Alex. Hill, 366
Bombay, the Flora of the Presidency of, Dr. Theodore Cooke, 362
Bonacina (L. C. W.), the "Daylight Saving" Bill, 69
Bone (Prof. W. A., F.R.S.), Explosive Combustion, with Special Reference to that of Hydrocarbons, Discourse at Royal Institution, 81
Bonnier (Gaston), the "Sense of Direction" in Bees, 269
Book of Nature-study, the, 344
Books of Science, Forthcoming, 53
Books of Science, Supplementary List of Forthcoming, 85
ξ Boötis, the Orbit of, Prof. Doberck, 380
Bordas (F.), the Diastases of Milk, 270
Borgen (Prof. Carl N. I.), Death of, 464
Bormans (Count de), Biologia Centrali-Americana, Orthoptera, Vol. i., Forficulidæ, 241
Borrelly (M.), Discovery of a New Comet, 1909*a*, 502; the Recent Lunar Eclipse, June 3, 502
(Borrelly-Daniel) Discovery of a Comet, 1909*a*, Mr. Daniel, 502; M. Javelle, 502; Prof. Kobold, 502; M. Borrelly, 502
Bort (L. Teisserenc de), General Results of the Meteorological Cruises of the *Otaria* on the Atlantic in 1905, 1906, and 1907, 219; Results of Theodolite Observations on *Ballons sondes* at Trappes, 355
Bosler (J.), Observations made at Meudon Observatory on Morehouse's Comet, 179
Bosworth (G. F.), Cambridge County Geographies: Essex, Kent, Surrey, Sussex, 305
Botallek Circles, the, Sir Norman Lockyer, K.C.B., F.R.S., 97
Botany: a Mould in Tanning with Oil, André Piedallu, 30; Variety of Organic Iron in Plants, P. J. Tarbouriech and P. Saget, 30; Death of J. Barbosa Rodriguez, 47; Obituary Notice of, 104; Phylogeny of the Bryophytes and Ferns, Dr. H. Schenck, 49; Einleitung in die experimentelle Morphologie der Pflanzen, Dr. K. Goebel, 61; Parthenogenesis und Apogamie im Pflanzenreiche, Dr. Hans Winkler, 61; Sense-organs in Leaves, Prof. G. Haberlandt, 76; Plant Distribution on "Mesas" near Boulder, Colorado, W. W. Robbins and G. S. Dodds, 76–7; Alternation of Generations in Plants, Dr. W. H. Lang, 87; the Montane Flora of Fiji, Miss L. S. Gibbs, 87; Linnean Society, 87, 148, 269, 359, 448, 478; Quantity of the Alkaloid Taxine in Yew, Richard J. Moss, 88; the Heredity of Acquired Characters in Plants, Rev. Prof. George Henslow, 93; Flora von Paderborn, Dr. M. P. Baruch, 105; Flora of Volcanic Region of Java and Sumatra, Dr. A. Ernst, 105; Ferments and Latent Life of Resting Seeds, Jean White, 118; Fresh-water Algæ from Burma, including a few from Bengal and Madras, W. West and G. S. West, 125; *Daviäia involucrata*, Baill., A. S. Horne, 148; Index Kewensis Plantarum Phanerogamarum, 156; Fluorescence of *Lignum Nephriticum*, Charles E. Benham, 159; Dr. O. Stapf, F.R.S., 218; John H. Shaxby, 248; Plants with Magic Qualities, Dr. H. Marzell, 166; Calendar of Algal Growth in the Bay of Sebastopol, B. W. Beenov, 167; Prickly Pear as Cattle-food, 167; Black Scab or Potato-wart, Prof. T. Johnson, 179; the Powdery Scab of the Potato, *Spongospora subterranea*, Prof. T. Johnson, 389; the Rate of Fall of Fungus Spores in Air, Prof. A. H. Reginald Buller, 186; Death of Prof. F. E. Hulme, 197; Obituary Notice of, 224; Influence of Radium Rays on Plants, Prof. C. S. Gager, 198; Sand-binding Plants, V. Subramania Iyer, 198; Oil-palm Kernels, a Variety with Soft Shells, 198; Lalang Grass, Material for Paper Pulp, J. M. Hillier, 198; Limitation of the Genus Athyrium, Dr. E. B. Copeland, 226; Structure and Relations of the Reproductive Organs of *Heterangium Grievii*,

Dr. Margaret Benson, 239; Bulletin of Miscellaneous Information, Royal Botanic Gardens, Kew, 1908, 246; Classification of the Geoglossaceæ, Dr. E. J. Durand, 258; Botanical Discoveries near Dover, Rev. J. Taylor, 258; W. R. Jeffery, 258; Suspension of Life in Certain Seeds, Paul Becquerel, 270; the New Flora of the Volcanic Island of Krakatau, Prof. A. Ernst, 279; Campfires on Desert and Lava, W. T. Hornaday, 279; Geotropism and the Statolith Theory, E. Maigre, 286; Philippine Species of Garcinia, E. D. Merrill, 286; Botany of the Færöes, 303; Anthocyanin, Miss M. Wheldale, 328; die Blütenpflanzen Afrikas, Franz Thonner, Dr. Otto Stapf, F.R.S., 333; Experiments with Cyclamen Seedlings, Sir W. T. Thiselton-Dyer, 349; Flora of Ngamiland, Major and Mrs. E. J. Lugard, 351; the Flora of the Presidency of Bombay, Dr. Theodore Cooke, 362; Flower and Grass Calendars for Children, Agnes Fry, 368; Spermatogenesis in *Dioon edule*, Prof. C. F. Chamberlain, 378; Transport of Carbon Dioxide in Leaves, Dr. V. Zijlstra, 379; Lectures on the Evolution of the Filicinean Vascular System, A. G. Tansley, 391; zur Biologie des Chlorophylls, Laubfarbe und Himmelslicht, Vergilbung und Etiolement, Ernst Stahl, 393; Cytology of Fucus, Dr. S. Yamanouchi, 407; Vegetation in and around the Red-rock Lake, Colorado, Dr. F. Ramaley, 407; das Pflanzenreich, Scrophulariaceæ-Calceolarieæ, Fr. F. Kränzlin, Erythroxylaceæ, O. E. Schulz, Styracaceæ, J. Perkins, Potamogetonaceæ, P. Ascherson and P. Graebner, Orchidaceæ-Cœlogyninæ, E. Pfitzer and Fr. Kränzlin, Liliaceæ-Aloineæ, A. Berger, Sarraceniaceæ, J. M. Macfarlane, Stylidiaceæ, J. Mildbraed, Nepenthaceæ, J. M. Macfarlane, Araceæ-Monsteroideæ and Calloideæ, A. Engler and K. Krause, 424; the Colours of Leaves, George Abbott, 429; Causes of Autumnal Colour Effect in Leaves of *Terminalia catappa*, Dr. M. Miyoshi, 465; Power of Plants to Absorb Moisture through the Leaf-surface, S. Awano, 436; the Gardens of Achnashie, Rosneath, Rev. D. Landsborough, 436; Botanic Gardens and Government Domains in Sydney, New South Wales, J. H. Maiden, 436; Vegetative Cross between Nightshade and Tomato, Prof. H. Winkler, 436; Modifications of Colour in Plants, Prof. H. Kraemer, 443; New Observation on the Moth of the Olive, Th. Dumont, 449; Plants and their Ways, E. Evans, 452; Mikroskopischer und physiologischer Praktikum der Botanik für Lehrer, G. Müller, 452; a First Book of Botany, Elizabeth Healey, 452; Familiar Swiss Flowers, F. E. Hulme, 452; the Pollination of the Primrose, John J. Ward, 457; W. E. Hart, 457, 492; The Reviewer, 457; Notes of a Botanist on the Amazon and Andes, Richard Spruce, 458; New South Wales Linnean Society, 479; Reddening of the Branches of Salicornia, H. Colin, 480; Influence of Nutritive Media on Development of the Embryos of *Pinus pinea*, J. Lefèvre, 480; the Streletz Steppe, W. Alechin, 500; the Flora of Prince Charles Foreland, Spitsbergen, R. N. R. Brown, 501; a Warm-water Bath as Means of Forcing Plants, Prof. H. Molisch, 501; Algæ and Lichens of Lake Selguer, A. A. Elenkin, 501

Bott (A. E. H.), Minimum Thermometer and Severe Cold, 140

Bottomley (Prof. W. B.), Effects of Nitrogen-fixing Bacteria on the Growth of Non-leguminous Plants, 327

Bouasse (Prof. H.), Cours de Physique conforme aux Programmes des Certificats et de l'Agrégation de Physique, Optiques, Études des Instruments, 153

Bougault (J.), the Condensation of Glyoxylic Acid with some Ketones, 380

Boulanger (A.), Hydraulic Générale, 396

Boule (Marcellin), Cranial Capacity of Fossil Men of the Type known as Neanderthal, 390; Skeleton of the Fossil Man of La Chapelle-aux-Saints, 480

Boulenger (C. L.), Migration of the Thread-cells of Moerisia, 88

Bourne (Prof. Gilbert C.), the Natural History Museum, 229

Bowman (Dr. F. H.), the Structure of the Wool Fibre and its Relation to the Use of Wool for Technical Purposes, 4

Bowman (Prof. H. L.), a Stage Goniometer for Use with the Dick Pattern of Microscope, 178

Boyer (Jacques), Artificial Production of Precious Stones, 408

Bragg (Prof. W. H.), Want of Symmetry shown by Secondary X-rays, 327

Brassey (Lord), Types of Warships omitted in Recent Programmes of Naval Construction, 172

Brauner (Prof. Bohuslav), the Gases of the Ring Nebula in Lyra, 158

Brauns (Prof. R.), the Mineral Kingdom, 275

Breeding for Milk, 77

Brendler (Dr. Wolfgang), Mineralien-Sammlungen, 423

Brester (A.), Hale's Solar Vortices, 79

Brethes (J.), Nests of the Argentine Spider *Mastophora extraordinaria*, 137

Bridges (J. H.), Essays and Addresses, 217

Bridgman (P. W.), High Hydrostatic Pressures, 107

Brightwen (Eliza), Last Hours with Nature, 129; the Life and Thoughts of a Naturalist, 426

Briner (E.), Chemical Reactions in Gaseous Mixtures submitted to very High Pressures, 479

British Antarctic Expedition, Return of the, 102

British Association Committee appointed for the Investigation of Gaseous Explosions, with Special Reference to Temperature, First Report of the, Prof. E. G. Coker, 505

British Association, Winnipeg Meeting, Prof. Henry E. Armstrong, F.R.S., 159

British Association, Winnipeg Meeting of the, 432

British Butterflies and other Insects, 67

British Empire (and Japan), the, W. Bisiker, 213

British Guiana, the Geology of the Goldfields of, J. B. Harrison, 395

British Islands, the Genitalia of the Noctuidæ of the Lepidoptera of the, F. M. Pierce, 246

British Museum: Synopsis of the British Basidiomycetes, a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, Worthington G. Smith, 184; Catalogue of the Lepidoptera Phalænæ in the British Museum, Sir George F. Hampson, Bart., 338

British Science Guild, Sir William Ramsay, 52; Sir Frederick Pollock, 52

Brizard (M.), the Charges of Chemical Fumes, 449

Brodrick (H.), Limestone Caves of Marble Arch, Co. Fermanagh, 88

Broglie (M. de), Photographic Registration of Brownian Trajectories in Gases, 329; Measurements of the Brownian Movements in Gases and the Charge of Particles in Suspension, 389; the Charges of Chemical Fumes, 449

"Bromoil" Process, the, F. J. Mortimer, 324

Bronson (Dr. Howard L.), on the α Rays from Radium B, 159

Brooke (Gilbert E.), the Essentials of Sanitary Science, 182

Brookes (Prof. W. K.), Origin of the Lung of Ampullaria, 382

Brooks (E. E.), Spectrum of Magnesium in Hydrogen, 410

Brooks's Comet (1889 V), the Perturbations of, by Jupiter in 1886, Prof. Poor, 410; G. Deutschland, 410

Brown (E. and W.), Influence of Breed on Egg-production in Poultry, 138

Brown (H. C.), Curious Device for Cheating Death, 48

Brown (R. N. Rudmose), Report on the Scientific Results of the Voyage of S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, 161; the Flora of Prince Charles Foreland, Spitsbergen, 501

Brown (William), an Introduction to Social Psychology, William McDougall, 245; Lectures on the Elementary Psychology of Feeling and Attention, Prof. E. B. Titchener, 245

Browning (Dr. Phillip E.), Introduction to the Rarer Elements, 182

Bruce (Colonel Sir David), Kleine's Observations on the Period during which the Tsetse-fly was capable of transmitting a Trypanosome Infection, 315; Latency in Infectivity of Tsetse-flies, 436

Bruhat (G.), Coefficient of Diffusion of the Actinium Emanation, 89

Brunner (Prof. Lawrence), Biologia Centrali-Americana, Orthoptera, Vol. ii., Acridiidæ, 241

Brussel (J. B. Van), Mechanical Irrigation Plants, Nile Irrigation Station at Wadi Kom-Ombo, 18
Bruylants (P.), Derivative of Trimethylene, 228
Bryan (Prof. G. H., F.R.S.), Aërodonetics, F. W. Lanchester, 221; Artificial and Natural Flight, Sir Hiram Maxim, 221; Recent Progress in Aëronautics, Major George O. Squier, 223; the Stabilisation of Aëroplanes, Étienne Maigre, 223; Wave Motion and Bessel's Functions, 309; the Government and Aëronautical Research, 313
Buisson (H.), Comparison of the Lines of the Spectrum of the Electric Arc and of the Sun, Pressure of the Reversing Layer in the Solar Atmosphere, 149; Pressure in the Sun's Atmosphere, 229; Unsymmetrical Enlargement of the Lines of the Arc Spectrum and their Comparison with those of the Solar Spectrum, 389
Buller (Prof. A. H. Reginald), the Rate of Fall of Fungus Spores in Air, 186
Burbank's (Luther) Work, the Scientific Aspects of, D. S. Jordan and V. L. Kellogg, 337
Burgess (G. H.), Melting Point of Platinum, 329
Burnham (Prof.), Double-star Measures, 19
Burtt-Davy (J.), Plants Poisonous to Stock, 225; Catalogue of Native Trees of the Transvaal, 318
Butterflies, British, and Other Insects, 67
Byrnes (Dr. Esther), Fresh-water Species of Cyclops of Long Island, 174

Calcium Lines in Furnace Spectra, Chromospheric, Dr. A. S. King, 260
Calculation of Cometary Orbits, the, Prof. Kobold, 288
Calcutta: Asiatic Society of Bengal, 89, 150
California Earthquake of April 18, 1906, Andrew C. Lawson, 10
Calman (Dr. W. T.), Gigantocypris and the *Challenger*, 248; a Treatise on Zoology, Part vii., Third Fascicle, Crustacea, 361
Calmette (A.), Evacuation of Tubercle Bacilli by the Bile in the Intestine in Animals affected with Latent Lesions, 89
Cambridge: Reports of the Cambridge Anthropological Expedition to Torres Straits, Vol. vi., Sociology, Magic, and Religion of the Eastern Islanders, 9; Cambridge Philosophical Society, 88, 328, 419; Reform at Cambridge, 345; the Darwin Commemoration at Cambridge, 496
Cambridge County Geographies: Essex, Kent, Surrey, Sussex, G. F. Bosworth, 305
Camera Objectives for Spectrographs, Mr. Plaskett, 440
Cammidge (P. J.), the Urine in Diseases of the Pancreas, 386
Camp-fires on Desert and Lava, W. T. Hornaday, 279
Campbell (A.), Method of Testing Photographic Shutters, 419
Campbell (Prof.), the Intra-Mercurial Planet Problem, 320; Spectroscopic Binaries, 321
Campbell (Norman R.), an Electromagnetic Problem, 39
Canada, Partial Eclipse of the Sun in, Dr. Downing, 320
Canadian Waterways, American and, 461
Canals of the Martian Doubles, the "Original," Prof. Lowell, 260
Canals, Development of Martian, Prof. Lowell, 288
Cancer, Incidence of, in Mice of known Age, Dr. E. F. Bashford and Dr. J. A. Murray, 387
Cany (M.), Penetration of Pulverised Liquids into the Respiratory Tracts, 150
Cape Observatory, the, 79
Cape Town: Royal Society of South Africa, 360
Carnegie Foundation for the Advancement of Teaching, the, Prof. John Edgar, 399
Carnegie Institution of Washington, the, 142
Carnegie Trust, Scientific Research and the, 20
Caro (Dr. N.), Fixation of Atmospheric Nitrogen, 412
Caro (Prof.), Process for the Manufacture of Calcium Cyanamide by, 472
Carpenter (Prof.), Melting Point of Iron, 140
Carpenter (Prof. G. H.), a Student's Text-book of Zoology, Prof. Adam Sedgwick, F.R.S., Vol. iii., the Introduction to Arthropoda, the Crustacea, and Xiphosura, J. J. Lister, F.R.S., the Insecta and Arachnida, Dr. A. E. Shipley, F.R.S., 361; a Treatise on Zoology, Part vii., Third Fascicle, Crustacea, Dr. W. T. Calman, 361; Injurious Insects observed in Ireland during 1908, 479
Carpenter (R. C.), Internal Combustion Engines, their Theory, Construction, and Operation, 124
Carpentier (M.), Remarks on a Set of Standards of Length presented by M. Johansson, 209
Carré (P.), Magnesium Derivatives of the Xylyl Bromides, 300
Carus-Wilson (C.), the Pitting of Flint-surfaces, 448
Casanowicz (I. M.), United States National Museum Collection of Rosaries, 502
Cassell's Elementary Geometry, W. A. Knight, 305
Catania, Photometric Observations at, A. Bemporad, 288
Cattle: Breeding for Milk, 77
Caucasus: la Côte d'Azur Russe (Riviera du Caucase), E. A. Martel, Prof. Grenville A. J. Cole, 40
Cave (Charles J. P.), the Temperature of the Upper Atmosphere, 456
"Cave-nebula" in Cepheus, a New, Prof. Wolf, 19
Cell as the Unit of Life, the, and Other Lectures delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, Allan Macfadyen, 123
Cepheus, a New "Cave-nebula" in, Prof. Wolf, 19
Ceramics: Transactions of the English Ceramic Society, 385; Gas-firing, Dr. Seligman, 385; Mr. Schmatolle, 385; Adsorption and Dissolution of Gases by Silicates, Messrs. Moore and Mellor, 385
Chadwick Lectures, the, University of London, Session 1907–8, W. D. Scott-Moncrieff, 397
Challenger Society, 328
Chamberlain (Prof. C. F.), Spermatogenesis in *Dioon edule*, 378
Chapman (A. C.), Estimation of Creatinine, 470
Chapman (F. M.), Manner in which Young Flamingoes Feed, 499
Chappuis (J.), Leçons de Physique générale, 6
Charcot (Dr. J. B.), the French Antarctic Expedition, Communication from, 285
Charpy (Georges), Action of Carbon Monoxide upon Chromium, Nickel, Manganese, their Oxides and Alloys, 59; Formation of Graphitic Oxide and the Definition of Graphite, 210
Chattaway (Dr. F. D., F.R.S.), Ammonium Perhalides, 349
Chauveau (A.), Invisible Pathogenic Micro-organisms and the Physical Proofs of their Existence, 299
Chauvenet (Ed.), Anhydrous Combinations of Thorium Chloride with the Alkaline Chlorides, 389
Chemistry: Biochemie, ein Lehrbuch für Mediziner Zoologen und Botaniker, Dr. F. Röhmann, 6; Radiothorium, Frederick Soddy, 12; Evolution of Heat by Radium, Drs. E. von Schweidler and V. F. Hess, 18; Decomposition of Water by Radium Salts, A. Debierne, 149; Chemical Action of the Penetrating Rays of Radium on Water, Miroslaw Kernbaum, 149; Production of Radium from Uranium, Frederick Soddy, 308; Liquid Radium Emanation, Sir William Ramsay, K.C.B., F.R.S., 347; Radium and Uranium contained in Radioactive Minerals, Ellen Gleditsch, 449; Variation of Refractive Indices of Mixtures of Liquids with their Composition, Dr. V. F. Hess, 18; Osmotic Pressures of Weak Solutions of Calcium Ferrocyanide, Earl of Berkeley, E. G. J. Hartley and J. Stephenson, 28; Spontaneous Crystallisation of Monochloracetic Acid and its Mixtures with Naphthalene, Dr. H. A. Miers and Miss F. Isaac, 28; Atomic Weight of Potassium, G. D. Hinrichs, 29; Syntheses by Means of the Mixed Zinc Organo-metallic Derivatives, E. Blaise and A. Kœhler, 29; Colloidal Properties of Starch with Respect to its Chemical Constitution, Eugène Fouard, 29; Handbuch der anorganischen Chemie, 32; Death and Obituary Notice of Prof. Julius Thomsen, M. M. Pattison Muir, 46; Supposed Effect of Crystallisation for modifying the Properties of the Solution of a Body resulting from the Direct Union of Two Solutions, D. Gernez, 59; Molecular Volumes, Densities, and Atomic Weights, A. Leduc, 59; Equilibria between the Liquid and Solid Phases in the Mixture $NaCl+H_2O$, Camille Matignon,

59; Determination of Physical Constants of the Peptones, L. Lematte and A. Savés, 59; Action of Gaseous Hydrochloric Acid on Amorphous Silicon, A. Besson and L. Fournier, 59; Action of Carbon Monoxide upon Chromium, Nickel, Manganese, their Oxides and Alloys, Georges Charpy, 59; Condensation of the Mesoxalic Esters with Aromatic Hydrocarbons, A. Guyot and G. Estéva, 59; Sensitive Reactions for the Detection and Identification of Glycerol, Georges Denigès, 59; Action of Light upon Milk to which Potassium Bichromate has been Added, A. Gascard, 60; Sterilisation of Milk by the Ultra-violet Rays, Victor Henri and G. Stodel, 60; Determination of Added Water in Decomposed Milks, André Kling and Paul Roy, 270; the Diastases of Milk, F. Bordas and F. Touplain, 270; Explosive Combustion, with Special Reference to that of Hydrocarbons, Prof. W. A. Bone, F.R.S., at Royal Institution, 81; Phosphides of Tin, Pierre Jolibois, 89; Transformation of Pinonic Acid into 1:3-Dimethyl-4-phenylacetic Acid, Ph. Barbier and V. Grignard, 89; Elementary Agricultural Chemistry, Herbert Ingle, Dr. E. J. Russell, 93; Leakage of Helium from Radio-active Minerals, Hon. R. J. Strutt, F.R.S., 147; Liberation of Helium from Radio-active Minerals by Grinding, J. A. Gray, 238; Cryoscopy of Colloids, Jacques Duclaux, 149; a New Isomeride of Indigo, A. Wahl and P. Bayard, 149; Action of Caustic Potash on Borneol, Camphor, and Isoborneol, Marcel Guerbet, 149; Phosphorescence and Combustion Flames of Sulphur, L. Bloch, 149; New Method of Preparation of the β-Halogen Derivatives of Naphthalene, G. Darzens and E. Berger, 149; Action of Iron on Wine, M. Trillat, 150; Chemische Krystallographie, Prof. P. Groth, 154; New Calcium Carbide Factory at Odda, Norway, 168; Application of the Platinum Resistance Thermometer to the Determination of Molecular Weights in Fused Potassium Nitrate as a Solvent, J. G. L. Stern, 168; the Influence of Moisture on Chemical Change, Wilde Lecture at Manchester Literary and Philosophical Society, Dr. H. Brereton Baker, F.R.S., 175; the Hydrolytic Dissociation of Chloride of Bismuth, René Dubrisay, 180; Calculation of Molecular Weights by Means of Vapour Densities, Toluene, A. Leduc, 180; New Silicon Chlorides of the Silico-methane Series, A. Besson and L. Fournier, 180; Purification of Hydrated Sulphuric Acid from Arsenic by Freezing, M. Morance, 180; Colouring and Tinctorial Properties of Picric Acid, Léo Vignon, 180; Improved Method of preparing Allylcarbinol, H. Pariselle, 180; Introduction to the Rarer Elements, Dr. Phillip E. Browning, 182; New Crucible Support and Furnace, 204; Relation between Composition and Conductivity in Solutions of *meta*- and *ortho*-Phosphoric Acids, Dr. E. B. R. Prideaux, 209; Radiation and Temperature of the Flame of a Bunsen Burner, Edmond Bauer, 209; Radiation of Potassium Salts, E. Henriot, 209; Electro-analysis of Mercury Compounds with a Gold Kathode, Dr. F. Mollwo Perkin, 209; Action of Hydrogen on Sodium, A. Holt, jun., 209; New General Method for the Preparation of the Alcoholic Amines, Paul Sabatier and A. Mailhé, 209; Formation of Graphitic Oxide and the Definition of Graphite, Georges Charpy, 210; Preparation of Pure Iodic Anhydride, Marcel Guichard, 210; Complete Synthesis of Laudanosine, Amé Pictet and Mlle. M. Finkelstein, 210; Catalytic Preparation of the Ketones, J. B. Senderens, 210; an Organic Chemistry for Schools and Technical Institutes, A. E. Dunstan, 215; an Intermediate Course of Laboratory Work in Chemistry, E. K. Hanson and J. W. Dodgson, 215; Laboratory Notes on Industrial Water Analysis, a Survey Course for Engineers, Ellen H. Richards, 215; Derivatives of Trimethylene, P. Bruylants, 228; Increase in the Migration Value of Hydrogen in Hydrogen Chloride, Mr. Chittock, 228; Action between Metals and Acids and the Conditions under which Mercury causes Evolution of Hydrogen, Dr. S. W. J. Smith, 239; Study of the Gases disengaged by the Action of Copper Salts on Steels, E. Goutal, 239; Rapid Methods for the Chemical Analysis of Special Steels, Steel-making Alloys and Graphite, C. M. Johnson, 272; Radio-activity in Relation to Morozoff's Theory of the Constitution of Atoms, Prof. B. de Szyszkowski, 276; Atomic Weight of Chromium, 288; Tantalum and its Industrial Applications, Alex. Siemens at the Royal Institution, 290; Electrolytes and Colloids, the Physical State of Gluten, Prof. T. B. Wood and W. B. Hardy, F.R.S., 296; Results of Cooling Hydrated Platin-cyanides in Liquid Air, J. Emerson Reynolds, 297; Effect of Temperature on Ionisation, J. A. Crowther, 297; Ionisation of Various Gases by Secondary γ Rays, R. D. Kleeman, 298; the Density of Acetylene, E. Mathias, 299; Cuprous Sulphate, A. Recoura, 299; Magnesium Derivatives of the Xylyl Bromides, P. Carré, 300; Oxidation of Aromatic Nitro- and Nitroso-derivatives by Ammonium Persulphate, A. Seyewetz and L. Poizat, 300; Influence of the Reaction of the Medium on the Activity of the Maltases from Maize, R. Huerre, 300; the General Characters of the Proteins, Dr. S. B. Schryver, 307; Seventh International Congress of Chemistry, 313; the International Congress of Applied Chemistry, 412; Fixation of Atmospheric Nitrogen, Hofrath Prof. Bernthsen, Prof. Birkeland and Dr. N. Caro, 412; Scientific Work of the International Congress of Applied Chemistry, 470; a Curious Property of Neon, Prof. J. Norman Collie, F.R.S., 326, 347; Osmotic Pressure of Congo-red, Dr. W. M. Bayliss, 326; Colour Demonstrations of the Dissociating Action of Water, R. L. Taylor, 328; Anthocyanin, Miss M. Wheldale, 328; Work of Archibald Scott Couper, Prof. Richard Anschütz, 329; Fusibility of Mixtures of Gold and Tellurium, H. Pélabon, 329; Melting Point of Platinum, W. Waidner and G. H. Burgess, 329; Action of Oxidising Agents upon Silico-chloroform, A. Besson and L. Fournier, 329; New Method of Isomerisation in the Terpene Series, Géza Austerweil, 330; Suboxide of Cæsium, E. Rengade, 330; Leçons sur le Carbone, la Combustion, les Lois chimiques, H. le Chatelier, Prof. Arthur Smithells, F.R.S., 331; Ammonium Perhalides, Dr. F. D. Chattaway, F.R.S., 349; the York Air Tester, Messrs. John J. Griffin and Sons, 352; the Elements of Physical Chemistry, Prof. J. Livingston R. Morgan, 363; Outlines of Physical Chemistry, Dr. George Senter, 363; Chemical Physics Involved in the Decarburisation of Iron-carbon Alloys, W. H. Hatfield, 385; Anhydrous Combinations of Thorium Chloride with the Alkaline Chlorides, Ed. Chauvenet, 389; the Condensation of Glyoxylic Acid with some Ketones, J. Bougault, 389; Theory of Organic Bases according to the Viscosity of their Solutions, D. E. Tsakalotos, 390; Colouring Properties of Lead Chromate, Léo Vignon, 390; Action of the Bulgarian Ferment *Yoghourt* on Various Sugars, Gabriel Bertrand and F. Duchäcek, 390; the Theory of Valency, Dr. J. Newton Friend, 305; the Nature of Flame Spectra, E. Bauer, 408; Education and Research in Applied Chemistry, Prof. Raphael Meldola, F.R.S., at Society of Chemical Industry, 413; Tungsten, H. R. Van Wagenen, 439; Composition of Atmospheric Air, Georges Claude, 449; the Charges of Chemical Fumes, MM. de Broglie and Brizard, 449; a Chromyl Subchloride, P. Pascal, 449; Solubility of Lead Sulphate, J. Sehnal, 449; Revision of the Atomic Weight of Phosphorus, G. Ter Gazarian, 449; Oxidation of the Polyhydric Alcohols by a Peroxydasic System, E. de Stœcklin and E. Vulquin, 449; Vorlesungen über chemische Atomistik, Dr. F. Willy Hinrichsen, 453; First Principles of Chemical Theory, Dr. C. H. Mathewson, 453; Estimation of Phosphorus in Iron and Steel, Prof. Chesneau, 470; Estimation of Creatinine, F. C. Cook and A. C. Chapman, 470; Production of Pure Tellurium from its Ores, Prof. R. Schelle, 470; Experiments on the Action of the Silent Electric Discharge on Ethylene and Acetylene, Dr. M. Z. Jovitchitch, 471; Action of Dicarboxylic Acids on Cellulose, Prof. Knecht, 471; the Alcoholysis of Certain Esters, Prof. Haller, 471; New Method of preparing Ethyl Ether, Jean B. Senderens, 471–2; Experiments in Relation to the Theory of Dyeing, L. Vignon, 472; the Hydrolysis of Proteins, Dr. L. Hugounenq, 472; Process for the Manufacture of Calcium Cyanamide by Prof. Caro, 472; Analysis of Beeswax, Prof. Hugh Ryan, 479; Montanin and Montana Waxes, Prof. Hugh Ryan and T. Dillon, 479; Preparation of the Three Oxy- and the *p*-Dimethylamido- and Diethylamidobenzylidenecamphors and the *p*- and

m-Tolylidenecamphors, A. Haller and Ed. Bauer, 479; Normal Butine and some of its Derivatives, George Dupont, 479; the Maltase from Buckwheat, J. Huerre, 479–80; Chemical Reactions in Gaseous Mixtures submitted to very High Pressures, E. Briner and A. Wroczynski, 479; Untersuchungen über Kohlenhydrate und Fermente (1884–1908), Emil Fischer, 485; die Grundproben der "Deutschen Tiefsee-Expedition," Sir John Murray and Prof. E. Philippi, 486; "Chemical" Embryos, 507; Double Sulphates of Calcium, M. Barre, 510; the Metallic Character of the Pyryl Group, R. Fosse, 510

Cheneveau (C.), Apparatus for Radio-active Measurements by the Electroscope Method, 228

Chesneau (Prof.), Estimation of Phosphorus in Iron and Steel, 470

Chetwynd (Commander L. W. P.), an Explanation of the Adjustment of Ships' Compasses, 276

Chevalier (Father), a Remarkable Prominence, 108

Chick, the Development of the, F. R. Lillie, 271

Children, Hours of Sleep for, 79

China, Western Teaching for, Dr. Henry Dyer, 99

Chittenden (Dr.), American Insect Pests, 138

Chittock (Mr.), Increase in the Migration Value of Hydrogen in Hydrogen Chloride, 228

Chlorophylls, zur Biologie des, Laubfarbe und Himmelslicht, Vergilbung und Etiolement, Ernst Stahl, 393

Cholesterol in the Animal Organism, the Origin and Destiny of, Part v., Mary T. Fraser and J. A. Gardner, 327

Chree (Dr. C., F.R.S.), Temperature of the Upper Atmosphere, 127, 397; Lieut. Shackleton's Antarctic Expedition, the South Magnetic Pole, 130; Department of Commerce and Labour, Coast and Geodetic Survey, United States Magnetic Tables and Magnetic Charts for 1905, L. A. Bauer, 293; Magnetic Survey of the Dutch East Indies, 1903–7, Dr. W. van Bemmelen, 293; Survey of India, 293

Chromospheric Calcium Lines in Furnace Spectra, Dr. A. S. King, 260

Chronometry: the Summer Season Time Bill, 45; the "Daylight Saving" Bill, L. C. W. Bonacina, 69; Daylight and Darkness, 230

Church (Prof. Irving P.), Mechanics of Engineering, 33

Circularity of Planetary Orbits, the, Prof. T. J. J. See, 229

Clark (Dr. G. Herbert), Histological Changes in the Liver and Kidney after Chloroform Administered by Different Channels, 328

Claude (Georges), Composition of Atmospheric Air, 449

Clay Modelling in Manual Training from Plan, Elevation, and Section, F. W. Farrington, 36

Clay Modelling in Manual Training, Scholars' Handbook, 36

Clerici (Dr. Enrico), Simple Method of Finding Indices of Refraction of Liquids under the Microscope, 319

Clinch (G.), Sculptures of the Chalk Downs in Kent, Surrey, and Sussex, 298

Clodd (E.), Pre-animistic Stages in Savage Religion, 501

Cloud Photographs from a Balloon, Dr. William J. S. Lockyer, 310

Clough (C. T.), the Cauldron Subsidence of Glen Coe and the Associated Igneous Phenomena, 418

Clutterbuck (Rev. F. C.), Prospect of a Short Water Supply during the Coming Summer, 352

Coal: Practical Coal Mining, Prof. Henry Louis, 242; the Imperial Side of the Fuel Question, 277; Sir W. Ramsay, K.C.B., F.R.S., 278; Arthur McDougall, 309

Coblentz (Dr. W. W.) Investigation of the Radiation Constants of Metals, 288

Cockerell (Prof. T. D. A.), Another Fossil Tsetse-fly, 128

Codrington (T.), Notes on the Neighbourhood of the Victoria Falls (Rhodesia), 147

Cœlostat, a Double-image, for determining the Moon's Position, Mr. Wade, 468

Coggia (M.), the Recent Lunar Eclipse, June 3, 502

Cohen (J. B.), Dew-ponds, 309

Cohen (Louis), Influence of Terminal Apparatus on Telephonic Transmission, 18

Coker (Prof. E. G.), Laboratory Machine for Applying Bending and Twisting Moments Simultaneously, 87; the Internal Combustion Engine, H. E. Wimperis, 124; Internal Combustion Engines, their Theory, Construction, and Operation, R. C. Carpenter and H. Diederichs, 124; First Report of the British Association Committee appointed for the Investigation of Gaseous Explosions, with Special Reference to Temperature, 505

Cole (Prof. Grenville A. J.), la Côte d'Azur Russe (Riviera du Caucase), E. A. Martel, 40

Coleman (W. M.), First Course in Biology, 34

Colin (H.), Reddening of the Branches of Salicornia, 480

Collie (Prof. J. Norman, F.R.S.), a Curious Property of Neon, 326, 347

Coloured Objects, the Photography of, Dr. C. E. Kenneth Mees, 489

Coloured Stars in the Globular Cluster M 13, Prof. Barnard, 169

Colours of Leaves, the, George Abbott, 429

Colours and Magnitude of Stars, Mr. Franks, Miss Bell, 288

Comets: Observations of Comet Tempel$_2$-Swift, Prof. Barnard, 19; Comet Tempel$_2$-Swift, 1908*d*, MM. Ramband and Sy, 79; Photographs of Morehouse's Comet, 1908*c*, Rev. Joel Metcalf, 108; Position of, Dr. Ebell, 169; Observations made at Meudon Observatory on Morehouse's Comet, H. Deslandres, A. Bernard, and J. Bosler, 179; Observations of Comet Morehouse, Mr. Motherwell, 200; Prof. F. Ristenpart, 260; the Spectrum of Morehouse's Comet, Prof. Hartmann, 380; Position of Daniel's (1907*d*) Comet, H. H. Kritzinger, 169; Recent Observations of Daniel's Comet, 1907*d*, Prof. Wolf, 410; Halley's Comet, Mr. Crommelin, 228; the Meteoric Shower of Halley's Comet, W. F. Denning, 259; the Calculation of Cometary Orbits, Prof. Kobold, 288; the Perturbations of Brooks's Comet (1889 V) by Jupiter in 1886, Prof. Poor, 410; G. Deutschland, 410; Discovery of a Comet, 1909*a* (Borrelly-Daniel), Mr. Daniel, 502; M. Javelle, 502; Prof. Kobold, 502; M. Borrelly, 502; Elements and Ephemeris for Winnecke's Comet, 1909, Prof. Hillebrand, 502

Commerson (Philibert, D.M., Naturalist du Roi), the Life of, an Old-World Story of French Travel and Science in the Days of Linnæus, Captain S. Pasfield Oliver, 430

Compasses, an Explanation of the Adjustment of Ships', Commander L. W. P. Chetwynd, 276

Comstock (Prof. D. F.), an Electromagnetic Problem, 39

Conchology, Growth of the Shell of *Patella vulgata*, L., E. S. Russell, 87

Conran (M. J.), Theorems on the Twisted Cubic, 88

Conwentz (Prof. H.), the Care of Natural Monuments with Special Reference to Great Britain and Germany, 275

Cook (F. C.), Estimation of Creatinine, 470

Cook (T.), the Electrostatic Separation of Minerals, 178

Cooke (Ernest), a Catalogue of 1625 Southern Stars, 51

Cooke (Dr. Theodore), the Flora of the Presidency of Bombay, 362

Copeland (Dr. E. B.), Limitation of the Genus Athyrium, 226

Cornish (Dr. Vaughan), Wind-waves in Water, Sand, and Snow, 119

Corona, the Brightness of the, Prof. Perrine, 380

Cosmical Matter in Space, Prof. Newall, 142

Cosmogony, Scientific Papers, Vol. ii., Tidal Friction and, Sir George Howard Darwin, K.C.B., F.R.S., 421

Cotton Growing in the West Indies, West Indian Bulletin, the Journal of the Imperial Agricultural Department for the West Indies, 164

Cotton-weaving Sheds, Report of the Departmental Committee on Humidity and Ventilation in, 101

Coulomb's Law, Priestley and, C. J. Woodward, 8

Coulthurst (S. L.), the Oil and Bromoil Processes, 67

Couper (Archibald Scott), Life and Chemical Work of, Prof. Richard Anschütz, 329

Courmelles (Fouveau de), the Treatment of Nævus by Electrolysis and Radium Combined, 480

Cowie (George A.), the Fertilisation of Tea, 385

Cox (C. F.), Darwin and the Mutation Theory, 16

Cracknell (A. G.), Geometry, Theoretical and Practical, 7

Cram (M. P.), Fractionation of Crude Petroleum by Capillary Diffusion, 409

Craniology: Relative Size of the Frontal Lobe of the Brain,

Prof. Franklin P. Mall, 166; Cranial Capacity of Fossil Men of the Type known as Neanderthal, Marcellin Boule, 390
Crawford (W. J.), Dimensional Changes produced in Iron and Steel Bars by Magnetism, 339
Crawley (Rev. A. E.), Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, Wilhelm Wundt, 334
Crawshay (Richard), the Birds of Tierra del Fuego, 155
Crew (Dr. Henry), General Physics, 122
Crocodile's Nest, a, G. W. Grabham, 96
Crommelin (Mr.), Halley's Comet, 228
Crowther (J. A.), Passage of Röntgen Rays through Gases and Vapours, 57; Effect of Temperature on Ionisation, 297
Crucible Support and Furnace, New, 204
Crustacea: Changes in the Common Shore Crab caused by Sacculina, F. A. Potts, 88; an Account of the Crustacea of Norway, Prof. G. O. Sars, W. A. Cunnington, 184; Anaspidacea, Geoffrey Smith, 435
Crystallisation, Influence of Radium on the Velocity of, Louis Frischauer, 389
Crystallography: Chemische Krystallographie, Prof. P. Groth, 154; Studies of Frost and Ice Crystals, Wilson J. Bentley, 492
Cunningham (Mrs. M. E.), Openings in Knap Hill Camp, Wiltshire, 287
Cunnington (Mrs. M. E.), Excavation of Celtic Rubbish-heap near Oare, 17
Cunnington (W. A.), an Account of the Crustacea of Norway, Prof. G. O. Sars, 184
Curtis (Dr. Heber D.), Spectroscopic Binaries, 321
Curves, Easement, Prof. R. H. Smith, 467
Cushman (Allerton S.), the Preservation of Iron and Steel, 384
Cyclone? Is there a Vertical Magnetic Force in a, J. R. Ashworth, 40
Cytology: the Cell as the Unit of Life, and other Lectures Delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, Allan Macfadyen, 123
Cytomorphosis, the Problem of Age, Growth, and Death, a Study of, Prof. Charles S. Minot, 335

Dakin (W. J.), Pecten, 273
Daniel (Mr.), Discovery of a New Comet, 1909*a*, 502
Daniel's Comet, 1907*d*, Recent Observations of, Prof. Wolf, 410
Daniel's (1907*d*) and Morehouse's (1908*c*) Comets, Positions of, H. H. Kritzinger, 169; Dr. Ebell, 169
Dannemann (Dr. Friedrich), aus der Werkstatt grosser Forscher, 182
Darbishire (A. D.), Experimental Estimation of the Theory of Ancestral Contributions in Heredity, 27
Darwin (Sir George Howard, K.C.B., F.R.S.), Scientific Papers, Vol. ii., Tidal Friction and Cosmogony, 421
Darwin Celebrations in the United States, 72
Darwin Centenary Celebration, the, 433
Darwin Commemoration at Cambridge, the, 496
Darwin and Modern Science, Essays in Commemoration of the Centenary of the Birth of Charles Darwin and of the Fiftieth Anniversary of the Publication of the "Origin of Species," Prof. R. Meldola, F.R.S., 481
Darwinism, Recent Papers on, 142
Darzens (G.), New Method of Preparation of the β-Halogen Derivatives of Naphthalene, 149
Dates: Scientific, Handbuch zur Geschichte der Naturwissenschaften und der Technik, 66
Davenport (Gertrude and Charles), Heredity of the Colour of Hair in Man, 257
Davis (J. J.), Biological Studies of Three Species of Aphididæ, 257
Davis (J. R. Ainsworth), Nature Study, 192
Davis (Prof. W. M.), Glacial Erosion in North Wales, 179
Daylight and Darkness, 230
"Daylight Saving" Bill, the, L. C. W. Bonacina, 69
Deacon (Dr. G. F.), Death of, 499
Debierne (A.), Decomposition of Water by Radium Salts, 149; the Radium Emanation, 389
Deegener (Dr. P.), die Metamorphose der Insekten, 156
Delage (Yves), Sex in Sea-urchins obtained by Experimental Parthenogenesis, 29
Demons, Baskets used in Repelling, Kumagusu Minakata, 369
Dendy (Prof. A.), the Intracranial Vascular System of Sphenodon, 268
Denigès (Georges), Sensitive Reactions for the Detection and Identification of Glycerol, 59
Denning (W. F.), the Meteoric Fireball of February 22 and its Streak, 13; the Meteoric Streak of February 22, 42; Fireball of February 22, 69; Fall of an Aërolite in Mokoia, New Zealand, on November 26, 1908, 128; the Meteoric Shower of Halley's Comet, 259
Depéret (Charles), the Transformations of the Animal World, 452
Deprez (Marcel), Coefficient of Self-induction of a very long Bobbin, 179
Derry (Dr. Douglas E.), Anatomical Results of Excavations in Nubia, 466
Design in Creation, the Evolution of the Atmosphere as a Proof of, John Phin, W. E. Rolston, 216
Design in Nature, Dr. J. Bell Pettigrew, F.R.S., 151
Deslandres (H.), Observations made at Meudon Observatory on Morehouse's Comet, 179; a General Solution of the Spectroheliograph, 239, 380; Examination of the Upper Layers of Calcium and Hydrogen in the Solar Atmosphere and of the same Black Filaments in the Two Layers, 269; the Upper Layers of the Solar Atmosphere, 354; Critical Examination of the Monochromatic Images of the Sun with the Hydrogen Lines, 389
Despaux (A.), Explication méchanique des Propriétés de la Matière, Cohésion, Affinité, Gravitation, &c., 6
Deutschland (G.), the Perturbations of Brooks's Comet (1889 V) by Jupiter in 1886, 410
Devaux-Charbonnel (M.), Constitution of Subterranean Telephone Circuits in Large Towns, 29; the Standardisation of Condensers, 479
Dew-ponds, Geo. Hubbard, 223; Prof. J. B. Cohen, 309; Arthur Marshall, 429; L. Gibbs, 458
Diederichs (H.), Internal-combustion Engines, their Theory, Construction, and Operation, 124
Dilg (Carl), Post-embryonal Development of the Amazonian Manati, 166
Dillon (T.), Montanin and Montana Waxes, 479
Dines (W. H., F.R.S.), Barometric Oscillation, 8; Lieut. Shackleton's Antarctic Expedition, Meteorological Observations, 130; the Temperature of the Upper Atmosphere, 455
Diphtheria, the Bacteriology of, 243
Diseases, a Manual of Infectious, Dr. E. W. Goodall and Dr. J. W. Washbourn, 454
Dixon (Prof. H. B., F.R.S.), Experiments on the Ignition Point of Gases by the Method of Adiabatic Compression suggested by Prof. Nernst, 119; Photographs showing the Generation and Nature of "Explosion Waves" in Gases, 348
Dobbie (A. W.), the Levels of Sun-spots, 19
Dobell (C. C.), So-called "Sexual" Method of Forming Spores in Bacteria, 88; Spore-formation in the Disporic Bacteria, 435
Doberck (Prof.), the Orbit of ξ Boötis, 380
Dodds (G. S.), Plant Distribution on "Mesas" near Boulder, Colorado, 76–7
Dodgson (J. W.), an Intermediate Course of Laboratory Work in Chemistry, 215
Döflein (Prof. F.), Probleme der Protistenkunde, I., die Trypanosomen ihre Bedeutung für Zoologie, Medizin, und Kolonialwirtschaft, 489
Dolmage (Dr. Cecil G.), Astronomy of To-day, 181
Dorée (C.), Cholesterol in the Animal Organism, Part iii., 28
Double-image Coelostat for Determining the Moon's Position, Mr. Wade, 468
Double-star Measures, Prof. Burnham, 19
Double Stars, Measures for, Dr. Lau and Herr Luplau-Janssen, 200
Downing (Dr.), Occultations of Planets, 288; Partial Eclipse of the Sun in Canada, 320
Dowson (J. Emerson), Producer Gas for Engines, 200, 232
Dreaper (W. P.), Research and the Colleges, 128
Droop (Mr.), Early Civilisation in Northern Greece, 437

Drowning: Schäfer Method of Artificial Respiration in Case of the Apparently Drowned, 138
Dryness of Winter (1908–9), the, Alex. B. MacDowall, 40
Duane (William), Evolution of Heat by Radio-active Bodies, 449
Dublin: Royal Dublin Society, 88, 179, 388, 479; Royal Irish Academy, 88
Duboscq (O.), the Signification of the Rhabdospora, Supposed Parasitic Sporozoa in Fishes, 480
Dubrisay (René), the Hydrolytic Dissociation of Chloride of Bismuth, 180
Duchäcek (F.), Action of the Bulgarian Ferment *Yoghourt* on Various Sugars, 390
Duclaux (Jacques), Cryoscopy of Colloids, 149
Duddell (W.), a Bifilar Vibration Galvanometer, 419
Dudgeon (L. S.), Hæm-agglutinins, Hæm-opsonins, and Hæm-lysins in the Blood from Diseases in Man, 58
Duffield (G.), Emission Spectrum of Silver Heated in a Carbon-tube Furnace in Air, 168
Dufour (A.), Examination of Zeeman Effect for Certain Bands in the Emission Spectra of Gases, 352
Dumont (Th.), New Observation on the Moth of the Olive, 449
Dunbar (Prof.), Principles of Sewage Treatment, 5
Dunstan (A. E.), an Organic Chemistry for Schools and Technical Institutes, 215
Dupont (Georges), Normal Butine and some of its Derivatives, 479
Durand (Dr. E. J.), Classification of the Geoglossaceæ, 258
Dutch East Indies, Magnetic Survey of the, 1903–7, Dr. W. van Bemmelen, Dr. C. Chree, F.R.S., 293
Dutch East Indies, Meteorology of the, 356
Dyeing, Experiments in Relation to the Theory of, L. Vignon, 472
Dyer (Dr. Henry), Western Teaching for China, 99
Dyke (G. B.), Production of Steady Electrical Oscillations in Closed Circuits and a Method of Testing Radio-telegraphic Receivers, 239
Dynamics: a Brief Course in Elementary Dynamics for Students of Engineering, Ervin S. Ferry, 95; Notes on Dynamics, Sir G. Greenhill, 455
Dyson (Prof.), Systematic Motion of the Stars, 148

Earland (A.), Cycloloculina, a New Genus of Foraminifera, 285
Earth, the Face of the, E. Suess, 91
Earth, the Yielding of the, to Disturbing Forces, Prof. A. E. H. Love, F.R.S., at Royal Society, 252
Earthquakes: the California Earthquake of April 18, 1906, Andrew C. Lawson, 10; Earthquake at Calabria, February 27, 15; Earthquake in Portugal and Spain, 255; at Winnipeg, 349; Reinforced Concrete as a Suitable Material for Buildings likely to be Subjected to Earthquakes, 353; the Guatemalan Earthquakes and Eruption of 1902, W. S. Ascoli, 359; the Cause of Earthquakes, Prof. Hobbs, 444; the Italian Earthquake of December 28, 1908, Dr. G. Martinelli, 445; Earthquake in Southern France, 464; *see also* Seismology
Earthshine on the Moon, Photographs of the, M. Quénisset, 141
Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, Rev. John Griffith, 69
Eastman (Dr. Charles R.), Devonian Fishes of Iowa, 318
Ebbinghaus (Prof. H.), Death and Obituary Notice of, 14
Ebell (Dr.), Position of Morehouse's (1908*c*) Comet, 169
Eclipses: Partial Eclipse of the Sun in Canada, Dr. Downing, 320; the Recent Lunar Eclipse, June 3, MM. Borrelly and Coggia, 502; J. H. Elgie, 503.
Edgar (Prof. John), the Carnegie Foundation for the Advancement of Teaching, 399
Edinburgh Royal Society, 59, 148, 328, 478
Education: the Functions of Technical Colleges, Dr. George T. Beilby, F.R.S., at Association of Technical Institutions, 22; Handbook to the Technical and Art Schools and Colleges of the United Kingdom, 36; Secondary Education in England, 42; Western Teaching for China, Dr. Henry Dyer, 99; Agricultural Education, 101; Death and Obituary Notice of Sir Rowland Blennerhassett, 103; Higher Education in the United States, 112; the Encouragement of Research, Dr. E. H. Griffiths, F.R.S., 127; Research and the Colleges, W. P. Dreaper, 128; Rural Education in its Various Grades, 174; Functions of a University, Prof. C. Lloyd Morgan, F.R.S., 176; the Defects of English Technical Education and the Remedy, Dr. Robert Pohl at the Association of Teachers in Technical Institutions in Huddersfield, 205; Death of Dr. J. Marshall Lang, 283; Sammlung Naturwissenschaftlich-pädagogischer Abhandlungen, Prof. J. A. Green, 304; the Reform of Oxford University, 311; Reform at Cambridge, 345; Goethe und Pestalozzi, Karl Muthesius, 368; the Carnegie Foundation for the Advancement of Teaching, Prof. John Edgar, 399; Education and Research in Applied Chemistry, Prof. Raphael Meldola, F.R.S., at Society of Chemical Industry, 413; the Association of Teachers in Technical Institutions, 446; the Supply of Secondary Education in England and Elsewhere, A. J. Pressland, 473
Edwards (Dr. W. H.), Death of, 164, 224
Egypt: Mechanical Irrigation Plants, Nile Irrigation Station at Wadi Kôm-Ombo, J. B. van Brussel, 18; Handbook for Egypt and the Sudan, 155
Egyptology: Palæolithic Vessels of Egypt, or the Earliest Handiwork of Man, Robert de Rustafjaell, 246; the Tomb of Horemheb, Egypt, A. E. P. Weigall, 437
Ekman (Dr. V. W.), Measurements of the Compressibilities of Pure Water and of Sea-water, 168
Electricity: Priestley and Coulomb's Law, C. J. Woodward, 8; Moving-coil Galvanometer, Methods of Making the Instrument Suitable for Measuring Small Currents, Dr. M. Reinganum, 18; Rotation of the Electric Arc in a Radial Magnetic Field, J. Nicol, 27; Ionisation in the Atmosphere, Prof. A. S. Eve, 36; an Electromagnetic Problem, Prof. D. F. Comstock, 39; Norman R. Campbell, 39; Effect of Heat upon the Electrical State of Living Tissues, Dr. A. D. Waller, 58; Physico-chemical Method of Sterilising in the Cold and at a Distance, A. Billon-Daguerre, 59; Electromotive Force of Iodine Concentration Cells with One Electrode Saturated with Iodine, Principal A. P. Laurie, 59; Sterilisation of milk by the Ultra-violet Rays, Victor Henri and G. Stodel, 60; Suggested Effect of High-tension Mains, Sir Oliver Lodge, F.R.S., 67; Measurement of Dielectric Constants by the Oscillations of Ellipsoids and Cylinders in a Field of Force, W. M. Thornton, 86; Attempt to Detect Some Electro-optical Effects, Prof. H. A. Wilson, 118; the Electrical Properties of Flame, Prof. H. A. Wilson, F.R.S., at Royal Institution, 143; Effect of Radiations on the Brush Discharge, A. E. Garrett, 147; Pirani's Method of Measuring the Self-inductance of a Coil, A. E. Snow, 147–8; High-potential Primary Battery, W. S. Tucker, 148; Resonator Sparks, their Spectroscopic Analysis, G. A. Hemsalech and A. Zimmern, 149; Electromotive Forces of Magnetisation, V. Posejpal, 149; Integration of the Equations of Motion of an Electron describing an Orbit about an Ion in a Magnetic Field, Prof. Augusto Righi, 168; the Photo-electric Fatigue of Zinc, H. Stanley Allen, 178; the Electrostatic Separation of Minerals, T. Cook, 178; Coefficient of Self-induction of a Very Long Bobbin, Marcel Deprez, 179; New Electrical Hardening Furnace, E. Sabersky and E. Adler, 209; Relation between Composition and Conductivity in Solutions of *meta-* and *ortho*-Phosphoric Acids, Dr. E. B. R. Prideaux, 209; Electro-analysis of Mercury Compounds with a Gold Kathode, Dr. F. Mollwo Perkin, 209; Électricité Industrielle, C. Lebois, Prof. Gisbert Kapp, 213; Two New Systems of Electric Wiring, 227; Specific Heat of Air and Carbon Dioxide at Atmospheric Pressure, by the Continuous Electrical Method, at 20° C. and at 100° C., W. F. G. Swann, 238; Production of Steady Electrical Oscillations in Closed Circuits, and a Method of Testing Radio-telegraphic Receivers, Dr. J. A. Fleming and G. B. Dyke, 239; Effect of an Air Blast upon the Spark Discharge of a Condenser Charged by an Induction Coil or Transformer, Dr. J. A. Fleming and H. W. Richardson, 239; the Simple Equivalent of an Alternating Circuit of Parallel Wires, Dr. J. W. Nicholson, 247; Measurement of the Energy of Negative Electrons given out by Metals Heated in a Vacuum, Dr. A. Wehnelt and F. Jentzsch, 258; the Electrification of Rail-

ways, John A. F. Aspinall at Institution of Mechanical Engineers, 260; Properties of Doubly-charged Ions, Drs. J. Franck and W. Westphal, 287; Tantalum and its Industrial Applications, Alex. Siemens at the Royal Institution, 290; Phenomenon connected with the Discharge of Electricity from Pointed Conductors, with a Note by John Zeleny, H. T. Barnes and A. N. Shaw, 297; Theory of the Alternate-current Generator, Prof. Lyle, 328; Electrons and the Absorption of Light, R. A. Houston, 338; Counting of α Particles (Electrically charged Helium Atoms) by Prof. E. Rutherford's Method, T. H. Laby, 348; Electric Splashes on Photographic Plates, A. W. Porter, 348; Transformers for Single and Multiphase Currents, Prof. Gisbert Kapp, 365; Electrical Engineer's Pocket Book, Horatio A. Foster, 365; Selective Wireless Telegraphy, Sir Oliver Lodge, F.R.S., 381; the Charge of a Negative Ion of a Flame, Georges Moreau, 389; Measurements of the Brownian Movements in Gases and the Charge of Particles in Suspension, M. de Broglie, 389; Heavy Electrical Engineering, H. M. Hobart, Prof. Gisbert Kapp, 391; Electrical Conductivity of Pure Hexane, G. Jaffé, 409; a Bifilar Vibration Galvanometer, W. Duddell, 419; the Charges of Chemical Fumes, MM. de Broglie and Brizard, 449; New Electrode for Electrolytic Determination of Metals, J. W. Turrentine, 470; Experiments on the Action of the Silent Electric Discharge on Ethylene and Acetylene, Dr. M. Z. Jovitchitch, 471; the Treatment of Nævus by Electrolysis and Radium Combined, Fouveau de Courmelles, 480; Unités Électriques, le Comte de Baillehache, Dr. J. A. Harker, 488; the Theory of Electric Cables and Networks, Dr. Alexander Russell, 490; Inductance and Resistance in Telephone and Other Circuits, Dr. J. W. Nicholson, 509; New Wave Detector for Wireless Telegraphy and Telephony, G. E. Petit, 509; Method of Making Condensers with Pure Paraffin Wax, C. L. B. Shuddemagen, 502; the Arthur Wright Electrical Device for Evaluating Formulæ and Solving Equations, Dr. Russell and Arthur Wright, 509

Elenkin (A. A.), Algæ and Lichens of Lake Selguer, 501

Elgie (J. H.), the Recent Lunar Eclipse, June 3, 503

Ellis (G. W.), Cholesterol in the Animal Organism, Part iv., 28

Elsden (J. V.), Geology of the Neighbourhood of Seaford, 419

Embryogeny: Experimental Zoology, Dr. Hans Przibram, Dr. Francis H. A. Marshall, 2

Embryology: the Development of the Chick, F. R. Lillie, 271; Growth of Nerve Fibres, Ross Harrison, 325; Experimental Embryology, J. W. Jenkinson, 451; "Chemical" Embryos, 507

Engelmann (Prof. Wilh.), Death of, 375

Engineering: Mechanical Irrigation Plants, Nile Irrigation Station at Wadi Kôm-Ombo, J. B. van Brussel, 18; Lathe Design for High- and Low-speed Steels, Prof. John T. Nicholson and Dempster Smith, 33; Mechanics of Engineering, Prof. Irving P. Church, 33; Motor-car Mechanism and Management, W. Poynter Adams, 33; Steam Plant Trials at the Greenvale Mill, Littleborough, G. B. Storie, 50; Recent Grain-handling and Storing Appliances at the Millwall Docks, Magnus Mowat, 50; the Theory and Design of Structures, Ewart S. Andrews, 64; the Strength of Materials, Prof. Arthur Morley, 64; Death and Obituary Notice of Prof. W. C. Kernot, 75; Railway Tunnel under River Detroit, 76; Foundations of Lofty Buildings in American Practice, Frank W. Skinner, 78; the Internal-combustion Engine, H. E. Wimperis, Prof. E. G. Coker, 124; Internal-combustion Engines, their Theory, Construction, and Operation, R. C. Carpenter and H. Diederichs, Prof. E. G. Coker, 124; Construction and Wear of Roads, H. A. R. Mallock, F.R.S., 141; Laws of Heat and Transmission Deduced from Experiment, Prof. J. T. Nicholson at Junior Institution of Engineers, 144; New Calcium-carbide Factory at Odda, Norway, 168; the Panama Canal, 197; Producer Gas for Engines, J. Emerson Dowson, 200, 232; Laboratory Notes on Industrial Water Analysis, a Survey Course for Engineers, Ellen H. Richards, 215; the Plant Necessary in Warship Construction, 227; Oil Motors, G. Lieckfeld, 246; the Microscope in Engineering, Walter Rosenhain, 250; Automatic Recorder of Carbon Dioxide, Mr. Rosenhain, 259; Problems Connected with the Construction of *New York Times* Building, C. T. Purdy, 259; the Electrification of Railways, John A. F. Aspinall at Institution of Mechanical Engineers, 260; Death and Obituary Notice of Dr. Bindon Blood Stoney, F.R.S., 315; Road Motors and Problems Connected with Them, "James Forrest" Lecture at Institution of Civil Engineers, Colonel H. C. L. Holden, F.R.S., 323; Reinforced Concrete as a Suitable Material for Buildings likely to be Subjected to Earthquakes, 353; Elastic Limits of Iron and Steel under Cyclical Variations of Stress, L. Bairstow, 359; Transformers for Single and Multiphase Currents, Prof. Gisbert Kapp, 365; Electrical Engineer's Pocket Book, Horatio A. Foster, 365; Comparison Tests between New Féry Spiral Pyrometer and a Standardised Thermoelectric Féry Radiation Pyrometer, G. C. Pearson, 379; Heavy Electrical Engineering, H. M. Hobart, Prof. Gisbert Kapp, 391; Death of Eugène Grenet, 404; New 300-ton Universal Testing Machine, Messrs. W. and T. Avery, Ltd., 408; Briquette-making, Prof. W. Galloway, 409; Easement Curves, Prof. R. H. Smith, 467; Death of Dr. G. F. Deacon, 499; First Report of the British Association Committee appointed for the Investigation of Gaseous Explosions, with Special Reference to Temperature, Prof. E. G. Coker, 505

England: Secondary Education in England, 42; the Supply of Secondary Education in England and Elsewhere, A. J. Pressland, 473; Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, Rev. John Griffith, 69

Engler (A.), das Pflanzenreich, Araceæ-Monsteroideæ and Calloideæ, 424

Enteropneusta, Morphology of the, Dr. Arthur Willey, F.R.S., 218

Entomology: Cross-breeding of Two Races of the Moth *Acidalia virgularia*, Louis B. Prout and A. Bacot, 58; British Butterflies and other Insects, 67; Papers and Reports on Insects, 81; Nests of the Argentine Spider *Mastophora extraordinaria*, J. Brethes, 137; American Insect Pests, Dr. Ball, 138; Dr. Chittenden, 138; W. D. Hunter, 138; die Metamorphose der Insekten, Dr. P. Deegener, 156; Death of Dr. W. H. Edwards, 164, 224; Parasites of the Cotton-worm, Mr. Jemmett, 197; Biologia Centrali-Americana, Orthoptera, Vol. i., Dr. Henri de Saussure, Dr. Leo Zehntner, and A. Pictet, Forficulidæ, Count de Bormans, Vol. ii., Acridiidæ, Prof. Lawrence Brunner, Tettiginæ, Albert P. Morse, and Phasmidæ, Robert Shelford, 241; die Termiten oder weissen Ameisen, K. Escherich, 245; Biological Studies of Three Species of Aphididæ, J. J. Davis, 257; Angolan Oil-beetles (Meloidæ), Dr. F. Creighton Wellman, 263; Variability of the Six Castes of South African White Ants or Termites, Dr. Ernest Warren, 264; Catalogue of the Lepidoptera Phalænæ in the British Museum, Sir George F. Hampson, Bart., 338; the Tent-building Habits of the Ant *Lasius niger*, Linn., Dr. Marie Stopes and C. G. Hewitt, 388; Two New Parasites of the Black-currant Mite, Miss A. M. Taylor, 447; Economic Loss to United States through Disease-carrying Insects, Dr. L. O. Howard, 448; New Observation on the Moth of the Olive, Th. Dumont, 449; Injurious Insects observed in Ireland during 1908, Prof. G. H. Carpenter, 479

Erdmann (Prof. H.), Alaska, ein Beitrag zur Geschichte nordischer Kolonisation, 121

Eredia (Dr. F.), Discussion of the Temperature at Rome, 1855–1904, 106

Erlangen, Festschrift der Physikalisch-medizinischen Societät zu, zur Feier ihres 100 jährigen Bestehens am 27 Juni, 1908, 411

Erlangen, Sitzungsberichte der Physikalisch-medizinischen Societät in, 411

Ernst (Dr. A.), Flora of Volcanic Region of Java and Sumatra, 105; the New Flora of the Volcanic Island of Krakatau, 279

Eros, Solar Parallax from Observations of, Prof. Perrine, 468

Escherich (K.), die Termiten oder weissen Ameisen, 245

Essays and Addresses, J. H. Bridges, 217

Estéva (G.), Condensation of the Mesoxalic Esters with Aromatic Hydrocarbons, 59

Etévé (A.), Measurements of the Coefficient of Resistance of Air, 149
Ethnography: Death and Obituary Notice of Dr. J. D. E. Schmeltz, 405
Ethnology: Physiological and Medical Observations among the Indians of South-western United States and Northern Mexico, Aleš Hrdlička, 126; Death and Obituary Notice of Dr. William Jones, 196, 255; the Nandi: their Language and Folklore, A. C. Hollis, 249; Rock-engravings in South Africa, L. Péringuey, 411; Corr., R. Lydekker, 438
Eugenics, the Scope of, Prof. Karl Pearson, 203
Evans (E.), Plants and their Ways, 452
Evans (E. J.), Spectroscopic Researches, 508
Eve (Prof. A. S.), Ionisation in the Atmosphere, 36
Evershed (Mr.), Sun-spots and Solar Temperature, 169
Evolution: Darwin and the Mutation Theory, C. F. Cox, 16; Parallel Paths: a Study in Biology, Ethics, and Art, T. W. Rolleston, 35; Darwin Celebrations in the United States, 72; Recent Papers on Darwinism, 142; the Darwin Centenary Celebration, 433; Darwin and Modern Science, Essays in Commemoration of the Centenary of the Birth of Charles Darwin and of the Fiftieth Anniversary of the Publication of the "Origin of Species," Prof. R. Meldola, F.R.S., 481; the Darwin Commemoration at Cambridge, 496; Stellar Evolution, Prof. Moulton, 79; the Evolution of the Atmosphere as a Proof of Design in Creation, John Phin, W. E. Rolston, 216; Man in the Light of Evolution, Dr. J. M. Tyler, 275; Lectures on the Evolution of the Filicinean Vascular System, A. G. Tansley, 391; Mendelian Action on Differentiated Sex, Dr. D. Berry Hart, 478
Ewart (Prof. J. C., F.R.S.), the Natural History Museum, 229
Ewen (D.), the Bessemerising of Hardhead, 388
Explosive Combustion, with Special Reference to that of Hydrocarbons, Prof. W. A. Bone, F.R.S., at Royal Institution, 81
Explosives: the Manufacture of Explosives, Oscar Guttmann, 272; Detonation of Gun-cotton, Prof. C. E. Munroe, 443
Eyre (Dr. J.), Pathogenesis of *Micrococcus melitensis*, 328

Fabry (Ch.), Comparison of the Lines of the Spectrum of the Electric Arc and of the Sun, Pressure of the Reversing Layer in the Solar Atmosphere, 149; Pressure in the Sun's Atmosphere, 229; Unsymmetrical Enlargement of the Lines of the Arc Spectrum and their Comparison with those of the Solar Spectrum, 389
Fabry (Prof. E.), Traité de Mathématiques générales a l'usage des Chimistes, Physiciens, Ingénieurs, et des Élèves des Facultés des Science, 488
Fabry and Perot Interferometer, a Simple, Prof. James Barnes, 187
Face of the Earth, the, E. Suess, 91
Færöes, Botany of the, 303
Fagan (Mr.), Analyses of Brewers' and Distillers' Grains, 106
Falconry: the Bāz-Nāma-yi-Nāsirī, a Persian Treatise on Falconry, 371
Fallex (M.), la France et ses Colonies au Début au XXe Siècle, 368
Faraday Society, 209
Farrer (Reginald), Alpine and Bog Plants, 344
Farrington (F. W.), Clay-modelling in Manual Training from Plan, Elevation, and Section, 36
Fath (E. A.), Spectra of some Spiral Nebulæ and Globular Star Clusters, 354
Faure (L.), Relations between the Permeability of Soils and their Aptitude for Irrigation, 449
Fauvel (Pierre), Effects of Chocolate and Coffee on Uric Acid and the Purins, 480
Feldtmann (W. R.), the "Wholesale Idea" in Gold-mining, 299
Ferry (Ervin S.), a Brief Course in Elementary Dynamics for Students of Engineering, 95
Féry (C.), Determination of the Constant of Stefan's Law, 209
Fever Hospitals and Disinfecting and Cleansing Stations, the Planning of, Albert C. Freeman, 185
Field (J. H.), Kite Flights in India and Neighbouring Sea Areas during the South-west Monsoon Period of 1907, 77
Figure and Dimensions of the Sun, Changes in the, Prof. Moulton, 439
Filippi (F. de), Ruwenzori: an Account of the Expedition of H.R.H. Prince Luigi Amedeo of Savoy, Duke of the Abruzzi, 281
Filter with Regular Interstices of Variable Dimensions, a Metallic, É nile Gobbi, 300
Finkelstein (Mlle. M.), Complete Synthesis of Laudanosine, 210
Finlayson (A. M.), Nephrite and Magnesium Rocks of South Island, New Zealand, 359
Fireball of February 22, W. F. Denning, 69
Fischer (C. E. C.), Constructive Work for Restraining the Flow of Torrents and of the *Reboisement* of Mountain Slopes near Interlaken, 17
Fischer (Dr. Emil), the Paparudà Procession among the Roumanian Peasants, 204
Fischer (Emil), Untersuchungen über Kohlenhydrate und Fermente, 485
Fisher (Willard J.), Variation of the Viscosity of a Gas with Temperature, 77
Fisher (W. R.), Schlich's Manual of Forestry, 35
Fishes, Recent Papers on, 357
Fishing: Sunset Playgrounds: Fishing Days and Others in California and Canada, F. G. Aflalo, 431
Flame, the Electrical Properties of, Prof. H. A. Wilson, F.R.S., at Royal Institution, 143
Fleece, the Golden, Dr. Felix Oswald, 96
Fleming (Dr. J. A., F.R.S.), an Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, 65; Production of Steady Electrical Oscillations in Closed Circuits, and a Method of Testing Radio-telegraphic Receivers, 239; Effect of an Air Blast upon the Spark Discharge of a Condenser charged by an Induction Coil or Transformer, 239
Fleming (Mrs.), a Group of Red Stars in Sagittarius, 288
Flies, Sense of Smell in, Dr. Alex. Hill, 308
Flora of the Presidency of Bombay, the, Dr. Theodore Cooke, 362
Flora of the Volcanic Island of Krakatau, the New, Prof. A. Ernst, 279
Flower and Grass Calendars for Children, Agnes Fry, 368
Fluorescence, Early References to, and Light Transmitted by Thin Gold Films, John H. Shaxby, 128
Fluorescence of *Lignum Nephriticum*, Charles E. Benham, 159; Dr. O. Stapf, F.R.S., 218; John H. Shaxby, 248
Foley (N.), British and American Customary and Metric Legal Measures for Commercial and Technical Purposes, 367
Folklore: Plants with Magic Qualities, Dr. H. Marzell, 166; the Paparudà Procession among the Roumanian Peasants, Dr. Emil Fischer, 204; the Nandi: their Language and Folklore, A. C. Hollis, 249
Foods, Human, and their Nutritive Value, H. Snyder, C. Simmons, 366
Forestry: Results of Destruction of Forests in Northern China, F. N. Meyer, 17; Constructive Work for Restraining the Flow of Torrents and of the *Reboisement* of Mountain Slopes near Interlaken, C. E. C. Fischer, 17; Schlich's Manual of Forestry, W. R. Fisher, 35; Trees: a Handbook of Forest-botany for the Woodlands and the Laboratory, Prof. H. Marshall Ward, 126; Sand-binding Plants, V. Subramania Iyer, 198; Germination of Myrabolan Seedlings, J. E. C. Turner, 258; the Production of "Sal" *Shorea robusta*, A. L. McIntire, 317; Catalogue of Native Trees of the Transvaal, J. Burtt-Davy, 318; Rate of Growth of Palms, A. W. Lushington, 351; Trees on the Dawyck Estate in Peebles, W. B. Gourlay, 378; Over-consumption of Wood in the United States, 435; Lac Cultivation in India, D. N. Avasia, 436
Fosse (R.), the Metallic Character of the Pyryl Group, 510
Fossils: Untersuchungen fossiler Hölzer aus dem westen Vereinigten Staaten von Nordamerika, Dr. Paul Platen, 185
Foster (Horatio A.), Electrical Engineer's Pocket Book, 365
Fouard (Eugène), Colloidal Properties of Starch with respect to its Chemical Constitution, 29
Fournier (L.), Action of Gaseous Hydrochloric Acid on

Amorphous Silicon, 59; New Silicon Chlorides of the Silicomethane Series, 180; Action of Oxidising Agents upon Silicochloroform, 329
Fowle (Mr., Jun.), the Determination of the Solar Constant, 468
Fowler (A.), Spectroscopic Comparison of *o* Ceti with Titanium Oxide, 387
Fox (Francis), Pitchblende from Trenwith Mine, 349
France et ses Colonies au Début au XXe Siècle, la, M. Fallex and A. Mairey, 368
Franck (Dr. J.), Properties of Doubly-charged Ions, 287
Franks (Mr.), Colours and Magnitudes of Stars, 288
Fraser (Mary T.), Origin and Destiny of Cholesterol in the Animal Organism, 327
Fraser (Sir Thomas), *Strophanthus sarmentosus*, its Pharmacological Action and Use as an Arrow-poison, 328
Freeman (Albert C.), the Planning of Fever Hospitals and Disinfecting and Cleansing Stations, 185
Frenkel (Dr. M.), Method for Rendering Motor-car Escape Gas Odourless, 413
Fresh-water Algæ from Burma, including a few from Bengal and Madras, W. West and G. S. West, 125
Freudenberg (Wilhelm), Fauna of the Hundsheim Cave in Lower Austria, 263
Friedenthal (Dr. Gustav), Beiträge zur Naturgeschichte des Menschen, 211
Friend (Dr. J. Newton), the Theory of Valency, 395
Frischauer (Louis), Influence of Radium on the Velocity of Crystallisation, 389
Fritz (Dr. F.), Carpal Vibrissæ and Underlying Structures on Under Surface of Lower Part of Fore-arm of the Cat, 105
Frost and Ice Crystals, Studies of, Wilson J. Bentley, 492
Fry (Agnes), Flower and Grass Calendars for Children, 368
Fry (G. Cecil), A Text-book of Geography, 31
Fryer (J. C. F.), the Percy Sladen Trust Expedition to the Indian Ocean, 321
Fuel Question, the Imperial Side of the, 277; Sir W. Ramsay, K.C.B., F.R.S., 278; Arthur McDougall, 309
Fuller (W. P.), Effect of Temperature on the Hysteresis Loss in Iron in a Rotating Field, 419
Fungi: Synopsis of the British Basidiomycetes, a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, British Museum, Worthington G. Smith, 184; the Rate of Fall of Fungus Spores in Air, Prof. A. H. Reginald Buller, 186

Gager (Prof. C. S.), Influence of Radium Rays on Plants, 198
Galitzin (Prince), Records of the Calabrian Earthquake obtained at Pulkowa, 226
Galloway (Prof. W.), Briquette-making, 409
Gamgee (Dr. Arthur, F.R.S.), Death of, 136; Obituary Notice of, 194
Gardening, Alpine and Bog Plants, Reginald Farrer, 344
Gardiner (J. H.), Origin, History, and Development of the Röntgen-ray Tube, 438
Gardiner (J. Stanley, F.R.S.), the Percy Sladen Trust Expedition to the Indian Ocean, 321; the Germ-layer Theory, 428
Gardner (J. A.), Cholesterol in the Animal Organism, Parts iii. and iv., 28; Origin and Destiny of Cholesterol in the Animal Organism, 327
Gardner (Prof. Walter M.), the Structure of the Wool Fibre and its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, 4
Garrad (A. J.), New Method of Illumination for Photographic Work, the "Petrolite" Photographic Lamp, 439
Garrett (A. E.), Effect of Radiations on the Brush Discharge, 147
Gas: Producer Gas for Engines, J. Emerson Dowson, 200, 232
Gascard (A.), Action of Light upon Milk to which Potassium Bichromate has been Added, 60
Gaseous Explosions, First Report of the British Association Committee appointed for the Investigation of, with Special Reference to Temperature, Prof. E. G. Coker, 505
Gases: Number of Molecules in Unit Volume of a Gas, P. Ghose, 39; the Gases of the Ring Nebula in Lyra, Prof. Bohuslav Brauner, 158; Internal Pressure in Gases, A. Leduc, 449
Gaskell (Dr. Walter Holbrook, F.R.S.), the Origin of Vertebrates, 301; Gaskell's "Origin of Vertebrates," 428
Gaupp (Prof. E.), Problem of Man's Right-handedness, 500
Gautrelet (Jean), Hypotensive Function of Choline in the Organism, 240
Gazarian (G. Ter), Revision of the Atomic Weight of Phosphorus, 449
Gems: Artificial Production of Precious Stones, Jacques Boyer, 408; the Famous Hope Diamond, 464
Genetics, the Method and Scope of, Prof. W. Bateson, F.R.S., 396
Geography: Geography, Structural, Physical, and Comparative, Prof. J. W. Gregory, F.R.S., 31; a Text-book of Geography, G. Cecil Fry, 31; la Côte d'Azur Russe (Riviera du Caucase), E. A. Martel, Prof. Grenville A. J. Cole, 40; Geographical and Archæological Explorations in Chinese Turkestan in 1906–8, Dr. M. A. Stein, 47; Alaska, ein Beitrag zur Geschichte nordischer Kolonisation, Prof. H. Erdmann, 121; Structural Geography, Prof. J. W. Gregory, F.R.S., 157; the Reviewer, 157; Royal Geographical Society's Medal Awards, 165; Mountaineers of the Euphrates, E. Huntingdon, 167; the British Empire (and Japan), W. Bisiker, 213; the Shores of the Adriatic, the Austrian Side, F. Hamilton Jackson, 274; Ruwenzori, an Account of the Expedition of H.R.H. Prince Luigi Amedeo of Savoy, Duke of the Abruzzi, F. de Filippi, Prof. J. W. Gregory, F.R.S., 281; Mr. Roosevelt's Projected Hunting Trip in East Africa, Sir H. Johnston, 285; Cambridge County Geographies: Essex, Kent, Surrey, Sussex, G. F. Bosworth, 305; Leonardo da Vinci and Geography, Prof. Dr. Eugen Oberhummer, 351; la France et ses Colonies au Début du XXe Siècle, M. Fallex and A. Mairey, 368; Dr. Sven Hedin on Central Asia, 372; Revue de Géographie annuelle, 455
Geology: Limestone Caves of Marble Arch, Co. Fermanagh, H. Brodrick, 88; the Face of the Earth, E. Suess, 91; Geological Society, 118, 147, 179, 298, 359, 419, 448; Anniversary Address at, Time in Relation to Geological Events, Prof. W. J. Sollas, F.R.S., 118; Karroo System in Northern Rhodesia, and its Relation to the General Geology, A. J. C. Molyneux, 118; Notes on the Neighbourhood of the Victoria Falls (Rhodesia), T. Codrington, 147; Petrography of the New Red Sandstone in the West of England, H. H. Thomas, 147; Glacial Deposits of Western Carnarvonshire, Dr. T. J. Jehu, 148; the Glenboig Fireclay, its Halloysite and Sideroplesite, Prof. J. W. Gregory, 148; Sketch of the Mineral Resources of India, Sir T. H. Holland, 163; Glacial Erosion in North Wales, Prof. W. M. Davis, 179; Untersuchungen fossiler Hölzer aus dem westen Vereinigten Staaten von Nordamerika, Dr. Paul Platen, 185; the Rhine-Rhone Waterparting, Dr. L. Ritter von Sawicki, 258; the Lahat "Pipe," J. B. Scrivenor, 298; Sculptures of the Chalk Downs in Kent, Surrey, and Sussex, G. Clinch, 298; a Direct Estimate of the Minimum Age of Thorianite, Hon. R. J. Strutt, F.R.S., 308; the Percy Sladen Trust Expedition to the Indian Ocean, J. Stanley Gardiner, F.R.S., 321; J. C. F. Fryer, 321; Permian Footprints, G. Hickling, 328; "Blowing" Wells, Sydney H. Long, 330; Dr. A. Strahan, F.R.S., 370; Beeby Thompson, 429; the Boulders of the Cambridge Drift, R. H. Rastall and J. Romanes, 359; Nephrite and Magnesium Rocks of South Island, New Zealand, A. M. Finlayson, 359; Bau und Geschichte der Erde, O. Abel, 367; the Geology of the Goldfields of British Guiana, J. B. Harrison, 395; the Ore Deposits of South Africa, J. P. Johnson, 395; Death and Obituary Notice of T. Mellard Reade, 404; the Hartfell-Valentian Succession around Plynlimon and Pont Erwyd (North Cardiganshire), O. T. Jones, 419; Geology of the Neighbourhood of Seaford (Sussex), J. V. Elsden, 419; Cauldron Subsidence of Glen Coe and the Associated Igneous Phenomena, C. T. Clough, H. B. Muff, and E. B. Bailey, 448; the Pitting of Flint Surfaces, C. Carus-Wilson, 448; Geology of the Mount Flinders and Fassifern Districts, Queensland, Dr. H. I. Jensen, 479; die Grundproben der "Deutschen Tiefsee-Expedition," Sir John Murray and Prof. E. Philippi, 486; History of the Geological Society of Glasgow, 1858–1908, with Biographical Notices of Prominent Members, 487

Geometry: Geometry, Theoretical and Practical, W. P. Workman and A. G. Cracknell, 7; Practical Solid Geometry, Rev. P. W. Unwin, 305; Cassell's Elementary Geometry, W. A. Knight, 305; the Teaching of Geometry, Prof. George M. Minchin, F.R.S., 373; Grundlagen der Geometrie, D. Hilbert, 394
Germ-layer Theory, the, J. Stanley Gardiner, F.R.S., 428; the Reviewer, 428; Ric. Assheton, 492
German Anthropological Papers, 204
Germany: the Care of Natural Monuments with Special Reference to Great Britain and Germany, Prof. H. Conwentz, 275; Mitteilungen der deutschen dendrologischen Gesellschaft, 325; Germany and the Patents and Designs Act, 1907, 401
Gernez (D.), Supposed Effect of Crystallisation for Modifying the Properties of the Solution of a Body Resulting from the Direct Union of Two Solutions, 59
Geschichte der Naturwissenschaften und der Technik, Handbuch zur, 66
Gesichtsempfindungen, Abhandlungen zur Physiologie der, aus dem physiologischen Institut zu Freiburg-i-B., 125
Gessard (C.), the Catalase of the Blood, 449
Ghose (P.), Number of Molecules in Unit Volume of a Gas, 39
Gibbs (L.), Dew-ponds, 458
Gibbs (Miss L. S.), the Montane Flora of Fiji, 87
Gibson (A. H.), Depression of Filament of Maximum Velocity in a Stream flowing through an Open Channel, 147
Gibson (Charles R.), Scientific Ideas of To-day, 181
Gigantocypris and the *Challenger*, Dr. W. T. Calman, 248
Giglioli (Dr. Henry H.), an Ornithological Coincidence, 188
Gill (Rev. H. V.), a New Kind of Glow in Vacuum Tubes, 358
Gilmore (C. W.), Osteology and Affinities of the Jurassic American Iguanodont Reptiles of the Genus Camptosaurus, 378
Gilpin (J. E.), Fractionation of Crude Petroleum by Capillary Diffusion, 409
Glasgow, History of the Geological Society of, 1858–1908, with Biographical Notices of Prominent Members, 487
Glass, Errors of Position of Images Photographed through, Dr. Schlesinger, 503
Glasson (J. L.), Want of Symmetry shown by Secondary X-rays, 327
Glazebrook (Dr. R. T., F.R.S.), Photometric Units, 374
Gleditsch (Ellen), the Radium and Uranium contained in Radio-active Minerals, 449
Globular Star Clusters, Spectra of Some Spiral Nebulæ and, E. A. Fath, 354
Goadby (K.), Experimental Lead Poisoning, 436; Lead Poisoning, 472
Gobbi (Émile), a Metallic Filter with Regular Interstices of Variable Dimensions, 300
Goddard (S. F.), the Scalding and Sweating of Copper Battery Plates, 388
Goebel (Dr. K.), Einleitung in die experimentelle Morphologie der Pflanzen, 61
Goethe und Pestalozzi, Karl Muthesius, 368
Gold (E.), the Isothermal Layer of the Atmosphere, 68; Upper Air Temperatures, 217
Gold, the Story of, E. S. Meade, 306
Golden Fleece, the, Dr. Felix Oswald, 96
Goldfields of British Guiana, the Geology of the, J. B. Harrison, 395
Golf, the Physics of, Sir Ralph Payne-Gallwey, 237
Goodall (Dr. E. W.), a Manual of Infectious Diseases, 454
Goodbody (Dr. F. W.), Lead Poisoning, 472
Goos (F.), Radial Velocity of α Persei, 51
Gorsedd, the Welsh, Rev. W. Griffith, 468
Göttingen, Royal Society of Sciences, 90, 420
Gourlay (W. B.), Trees on the Dawyck Estate in Peebles, 378
Goutal (E.), Study of the Gases Disengaged by the Action of Copper Salts on Steels, 239
Gouy (M.), Magneto-kathode Rays, 149
Government and Aëronautical Research, the, Prof. G. H. Bryan, F.R.S., 313
Grabham (G. W.), a Crocodile's Nest, 96
Grablovitz (Prof.), Secondary Oscillation Recorded by the Tide-gauge at Ischia, 466
Grace (H.), Effect of Temperature on the Hysteresis Loss in Iron in a Rotating Field, 419
Graebner (P.), das Pflanzenreich, Potamogetonaceæ, 424
Grain-handling and Storing Appliances at the Millwall Docks, Recent, Magnus Mowat, 50
Grammar of Life, the, G. T. Wrench, 426
Gramophone as a Phonautograph, the, Prof. John G. McKendrick, F.R.S., 188
Gravely (F. H.), Apical Pigment-spots in the Pluteus of *Echinus miliaris*, 359
Gravitative Strain upon the Moon, the, Evan McLennan, 276; Sir Oliver Lodge, F.R.S., 307
Gray (Prof. A.), Lagrange's Equations of Motion and Elementary Solutions of Gyrostatic Problems, 59
Gray (J. A.), Liberation of Helium from Radio-active Minerals by Grinding, 238
Gray (J. G.), Low-temperature Experiments in Magnetism, 59
Gray (R. C.), Magnetic Properties of Certain Copper Alloys, 59
Great Britain and Germany, the Care of Natural Monuments with Special Reference to, Prof. H. Conwentz, 275
Greece, Early Civilisation in Northern, Messrs. Wace, Droop, and Thomson, 437
Green (Prof. J. A.), Sammlung Naturwissenschaftlich-pädagogischer Abhandlungen, 304
Greenhill (Sir G.), Notes on Dynamics, 455
Greenish (Prof. Henry G.), Handbuch der Pharmakognosie, Prof. A. Tschirch, 3
Greenly (Edward), the Ancient Greeks and Natural Science, 224
Greenwich, the Royal Observatory, 446
Greenwich Winter of 1908–9, the, Alex. B. MacDowall, 218
Gregory (Prof. J. W., F.R.S.), Geography, Structural, Physical, and Comparative, 31; the Glenboig Fireclay: its Halloysite and Sideroplesite, 148; Tuesite, 148; Structural Geography, 157; Ruwenzori: an Account of the Expedition of H.R.H. Prince Luigi Amedeo of Savoy, Duke of the Abruzzi, F. de Filippi, 281
Greig-Smith (Dr. R.), Can Opsonins be obtained directly from Bacteria and Yeast? 479; the Coagulation of Condensed Milk, 479
Grenet (Eugène), Death of, 404
Griffin (Messrs. John J., and Sons), the York Air-tester, 352
Griffith (Rev. John), Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, 69
Griffith (Rev. W.), the Welsh Gorsedd, 468
Griffiths (Dr. E. H., F.R.S.), the Encouragement of Research, 127
Grignard (V.), Transformation of Pinonic Acid into 1:3-Dimethyl-4-phenylacetic Acid, 89
Groth (Prof. P.), Chemische Krystallographie, 154
Growth of Nerve Fibres, Ross Harrison, 325
Grundproben der "Deutschen Tiefsee-Expedition," die, Sir John Murray and Prof. E. Philippi, 486
Guatemala, Explorations in the Department of Petén, and Adjacent Region, Memoirs of the Peabody Museum of American Archæology and Ethnology, Harvard University, T. Maler, 160
Guerbet (Marcel), Action of Caustic Potash on Borneol, Camphor, and Isoborneol Acid, 149
Guérin (C.), Evacuation of Tubercle Bacilli by the Bile in the Intestine in Animals affected with Latent Lesions, 89
Guichard (Marcel), Preparation of Pure Iodic Anhydride, 210
Guillemard (H.), Variations of Dehydrations of the Organism with Altitude, 510
Gun-cotton, Detonation of, Prof. C. E. Munroe, 443
Gun-firing Disturbances at Tiverton, Distant, 405
Guttmann (Oscar), the Manufacture of Explosives, 272
Guyot (A.), Condensation of the Mesoxalic Esters with Aromatic Hydrocarbons, 59
Gypsies: the Romanichels, Bob Skot, 318
Gyroscopischen Horizon Fleuriais, Beschrijving en Onderzoek van der, (Model Ponthus et Therrode), L. Roosenburg, 455

Haberlandt (Prof. G.), Sense-organs in Leaves, 76
Haddon (Dr. A. C., F.R.S.), an Imperial Bureau of Anthropology, 73
Haeckel (Ernst), Prof. Walther May, 126
Hahn (Prof. Hermann), Handbuch für physikalische Schülerübungen, 425
Hale (G. E.), Examination of the Upper Layers of Calcium and Hydrogen in the Solar Atmosphere and of the same Black Filaments in the Two Layers, 269
Hale (Prof.), Mount Wilson Solar Observatory Report, 260
Hale's Solar Vortices, A. Brester, 79
Haller (Prof.), the Alcoholysis of Certain Esters, 471
Haller (A.), Preparation of the Three Oxy- and the *p*-dimethylamido- and diethylamidobenzylidenecamphors and the *p*- and *m*-tolylidenecamphors, 479
Halley's Comet, Mr. Crommelin, 228
Halley's Comet, the Meteoric Shower of, W. F. Denning, 250
Hampson (Sir George F., Bart.), Catalogue of the Lepidoptera Phalænæ in the British Museum, 338
Handbook to the Technical and Art Schools and Colleges of the United Kingdom, 36
Hands (Alfred), Lightning and the Churches, 228
Hanson (E. K.), an Intermediate Course of Laboratory Work in Chemistry, 215
Hardy (G. H.), a Course of Pure Mathematics, 36
Hardy (W. B., F.R.S.), Electrolytes and Colloids, the Physical State of Gluten, 296
Harker (Dr. J. A.), Unités Électriques, le Comte de Baillehache, 488
Harries (Hy.), Obituary Notice of Dr. von Neumayer, For.Mem.R.S., 402; Corr., 439
Harris (Rollin A.), Manual of Tides, 91
Harrison (J. B.), the Geology of the Goldfields of British Guiana, 395
Harrison (Ross), Growth of Nerve Fibres, 325
Hart (Dr. D. Berry), Mendelian Action on Differentiated Sex, 478
Hart (W. E.), the Pollination of the Primrose, 457, 492
Hartley (E. G. J.), Osmotic Pressures of Weak Solutions of Calcium Ferrocyanide, 28
Hartmann (Dr. Max), Meaning of Sexuality in Relation to the Formation of Gametes, 500
Hartmann (Prof.), the Spectrum of Morehouse's Comet, 380
Hartwig (Prof.), SS Aurigæ (31.1907) an Irregular Variable, 288
Harvard College, Annals of the Astronomical Observatory of, a Search for a Planet beyond Neptune, W. H. Pickering, 463
Harvard College Observatory, Prof. Pickering, 321
Hastings (Prof. C. S.), the Hevelian Halo, 444
Hatch (Dr. F. H.), Text-book of Petrology, 337
Hatfield (W. H.), Chemical Physics Involved in the Decarburisation of Iron-carbon Alloys, 385
Haupt (Prof. P.), the Burning Bush and the Origin of Judaism, 444
Havelock (T. H.), the Wave-making Resistance of Ships, 298
Healey (Elizabeth), a First Book of Botany, 452
Healey (Maud), Fossils from Napeng Beds of Burma, 287
Heape (Walter), Proportion of Sexes Produced by Whites and Coloured Peoples in Cuba, 57
Heat: Thermal Effects of the Musical Arc, M. La Rosa, 29, 89; Effect of Heat upon the Electrical State of Living Tissues, Dr. A. D. Waller, 58; Laws of Heat and Transmission Deduced from Experiment, Prof. J. T. Nicholson at Junior Institution of Engineers, 144; Comparison Tests between New Féry Spiral Pyrometer and a Standardised Thermoelectric Féry Radiation Pyrometer, G. C. Pearson, 379; Evolution of, by Radio-active Bodies, William Duane, 449; Effect of Temperature on the Hysteresis Loss in Iron in a Rotating Field, W. P. Fuller and H. Grace, 419; Condensation of the Radium Emanation, A. Laborde, 509
Heavens, International Chart of the, 193
Heck (J. H.), Mechanical Method for Determining the Thrust of Propellers, 173
Hedin (Dr. Sven), on Central Asia, 372
Heidelberg, der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei, Otto Schoetensack, Dr. William Wright, 398
Hemsalech (G. A.), Resonator Sparks, their Spectroscopic Analysis, 149
Henderson (Dr. J. B.), Flight of a Rifled Projectile in Air, 57; Elasticity of Ships as Deduced from Experiments on the Vibration of Dynamical Models, 173
Henri (Victor), Sterilisation of Milk by the Ultra-violet Rays, 60
Henriot (E.), Radiation of Potassium Salts, 209
Henry (John R.), April Meteors, 188
Henslow (Rev. Prof. George), the Heredity of Acquired Characters in Plants, 93
Hepburn (Dr. A. Barton), Artificial Waterways and Commercial Development (with a History of the Erie Canal), 307
Heredity: Experimental Estimation of the Theory of Ancestral Contributions in Heredity, A. D. Darbishire, 27; the Heredity of Acquired Characters in Plants, Rev. Prof. George Henslow, 93; the Inheritance of Acquired Character, Dr. Wm. Woods Smyth, 277; the Scope of Eugenics, Prof. Karl Pearson, 203; Heredity of the Colour of Hair in Man, Gertrude and Charles Davenport, 257; (1) the Theory of Ancestral Contributions in Heredity; (2) the Ancestral Gametic Correlations of a Mendelian Population Mating at Random, Prof. Karl Pearson, 268; Mendelian Action on Differentiated Sex, Dr. D. Berry Hart, 478
Hergesell (Prof.), Experiments to Determine the Rate of Ascent of Rubber Balloons in Still Air, 355
Heron-Allen (E.), Mammoth Skeleton, 225; Cyclologulina, a New Genus of Foraminifera, 285
Herter (Prof. C. A.), on Infantilism from Chronic Intestinal Infection, Characterised by the Overgrowth and Persistence of Flora of the Nursling Period, 92
Hess (Dr. V. F.), Evolution of Heat by Radium, 18; Variation of Refractive Indices of Mixtures of Liquids with their Composition, 18
Heuse (Dr.), Methods of High Vacua, 50; Relative Efficiencies of Methods for the Production of High Vacua, 438
Hewitt (C. G.), the Tent-building Habits of the Ant *Lasius niger*, Linn., 388
Heyl (P. R.), Physics of the Æther, 443
Heyn (E.), Solubility of Steel in Sulphuric Acid, 384
Hickling (G.), Permian Foot-prints, 328
Hickson (Prof. Sydney J., F.R.S.), the Natural History Museum, 229
Higgins (Hugh), Low-temperature Experiments in Magnetism, 59
High-tension Mains, Suggested Effect of, Sir Oliver Lodge, F.R.S., 67
Hilbert (D.), Grundlagen der Geometrie, 394
Hildburgh (Dr. W. L.), Tibetan and Burmese Amulets, 387
Hilger (Dr. W.), die Hypnose und die Suggestion, ihre Wesen, ihre Wirkungsweise und ihre Bedeutung und Stellung unter den Heilmitteln, 273
Hill (Dr. Alex.), Sense of Smell in Flies, 308; the Body at Work, 366; Vapour-density and Smell, 427
Hill (Prof. Jas. P.), the Ancestry of the Marsupialia, 159
Hillebrand (Prof.), Elements and Ephemeris for Winnecke's Comet, 1909, 502
Hillier (J. M.), Lalang Grass, Material for Paper Pulp, 198
Hinks (Arthur R.), Determination of the Solar Parallax from Observations of Eros, 270
Hinrichs (G. D.), Atomic Weight of Potassium, 29
Hinrichsen (Dr. F. Willy), Vorlesungen über chemische Atomistik, 453
Histological Changes in the Liver and Kidney after Chloroform Administered by Different Channels, Dr. G. Herbert Clark, 328
Hobart (H. M.), Heavy Electrical Engineering, 391
Hobbs (Prof.), the Cause of Earthquakes, 444
Hoffmann (Dr. B.), Kunst und Vogelgesang in ihren wechselseitigen Beziehungen von naturwissenschaftlich-musikalischen Standpunkte beleuchtet, 336
Holden (Colonel H. C. L., F.R.S.), Road Motors and Problems connected with Them, "James Forrest" Lecture at Institution of Civil Engineers, 323
Holland (Sir T. H.), Sketch of the Mineral Resources of India, 163

Hollis (A. C.), the Nandi: their Language and Folklore, 249
Holt (A., Jun.), Action of Hydrogen on Sodium, 209
Holt (E. W. L.), the Life-history of the Eel, 357
Hopf (Ludwig), the Human Species, Considered from the Standpoints of Comparative Anatomy, Physiology, Pathology, and Bacteriology, 424
Hornaday (W. T.), Camp-fires on Desert and Lava, 279
Horne (A. S.), *Davidia involucrata*, Baill., 148
Horticulture: Treatment of Trees for Insect Pests, 138
Horwood (A. R.), Moral Superiority among Birds, 40; *Calamites* (*Calamitina*) *Schutzei*, Stur, 478
Hoskins-Abrahall (W.), a Winter Retreat for Snails, 96
House in the Water, the, Charles G. D. Roberts, 129
Houston (Dr.), Water Examinations, Value of the Storage of Raw River-water Antecedent to Filtration as a Means of Purification, 286
Houston (R. A.), Electrons and the Absorption of Light, 338
Howard (Dr. L. O.), Economic Loss to United States through Disease-carrying Insects, 448
Hrdlička (Aleš), Physiological and Medical Observations among the Indians of South-western United States and Northern Mexico, 126
Hubbard (Geo.), Dew-ponds, 223
Huddersfield, Association of Teachers in Technical Institutions in, the Defects of English Technical Education and the Remedy, Dr. Robert Pohl at, 205
Huerre (J.), the Maltase from Buckwheat, 479–80
Huerre (R.), Influence of the Reaction of the Medium on the Activity of the Maltases from Maize, 300
Hugounenq (Dr. L.), the Hydrolysis of Proteins, 472
Hulme (Prof. F. E.), Death of, 197; Obituary Notice of, 224
Hulme (F. E.), Familiar Swiss Flowers, 452
Human Species, the, Considered from the Standpoints of Comparative Anatomy, Physiology, Pathology, and Bacteriology, Ludwig Hopf, 424
Hunter (J. de Graaff), Apparatus for Measurements of the Defining Power of Objectives, 28
Hunter (W. D.), American Insect Pests, 138
Hunting, Brown-bear, in Alaska, G. Mixter, 378
Huntingdon (E.), Mountaineers of the Euphrates, 167
Hutchin (H. W.), Determination of Tungstic Acid in Low-grade Wolfram Ores, 388
Huyghens (Christian), Œuvres complètes de, publiées par la Société hollandaise des Sciences, 307
Hybridisation: Cross-breeding of Two Races of the Moth *Acidalia virgularia*, Louis B. Prout and A. Bacot, 58; the Scientific Aspects of Luther Burbank's Work, D. S. Jordan and V. L. Kellogg, 337
Hydraulics: Depression of Filament of Maximum Velocity in a Stream Flowing Through an Open Channel, A. H. Gibson, 147; the Flow of Rivers, Bouquet de la Grye, 148; Hydraulic Générale, A. Boulanger, 396
Hydro-carbons, Explosive Combustion with Special Reference to that of, Prof. W. A. Bone, F.R.S., at Royal Institution, 81
Hydrodynamics: Wave Motion and Bessel's Functions, Prof. G. H. Bryan, F.R.S., 309
Hydrogen, Spectrum of Magnesium in, E. E. Brooks, 410
Hydrography: Manual of Tides, Rollin A. Harris, 91; Hydrographical Surveying, Rear-Admiral Sir William J. L. Wharton, K.C.B., 307; New Method of Plotting Currents from Observations of Drifters, Prof. Thompson, 328
Hydrology: Artificial Waterways and Commercial Development (with a History of the Erie Canal), Dr. A. Barton Hepburn, 307; the Water Supply of Kent, with Records of Sinkings and Borings, William Whitaker, F.R.S., Dr. H. Franklin Parsons, Dr. H. R. Mill, and Dr. J. C. Thresh, 432; American and Canadian Waterways, 461; Water Power in the United States, 494
Hydrostatics: High Hydrostatic Pressures, P. W. Bridgman, 107
Hygiene: Hours of Sleep for Children, 70; Ventilation for Dwellings, Rural Schools, and Stables, F. H. King, 127; the Essentials of Sanitary Science, Gilbert E. Brooke, 182; Death of Dr. Letchworth Smith, 224; Water Examinations, Value of the Storage of Raw River Water Antecedent to Filtration as a Means of Purification, Dr. Houston, 286; Pollution of Sea-water, Prof. Kenwood and F. N. Kay-Menzies, 413
Hypnosis: die Hypnose und die Suggestion, ihre Wesen, ihre Wirkungsweise und ihre Bedeutung und Stellung unter den Heilmitteln, Dr. W. Hilger, 273

Ice Crystals, Studies of Frost and, Wilson J. Bentley, 492
Ichthyology: Submerged Vegetation of Lake Windermere as Affecting the Feeding Grounds of the Fish, Prof. F. E. Weiss, 120; the Life-history of the Eel, E. W. L. Holt, 357; Recent Papers on Fishes, 357; the Signification of the Rhabdospora, Supposed Parasitic Sporozoa in Fishes, L. Léger and O. Duboscq, 480
Ihering (H. von), les Mollusques fossiles du Tertiaire et du Crétacé supérieur de l'Argentine, 262
Images Photographed Through Glass, Errors of Position of, Dr. Schlesinger, 503
Imperial Bureau of Anthropology, an, Dr. A. C. Haddon, F.R.S., 73
Imperial Side of the Fuel Question, the, 277; Sir W. Ramsay, K.C.B., F.R.S., 278; Arthur McDougall, 309
Index Kewensis Plantarum Phanerogamarum, 156
India: Sketch of the Mineral Resources of India, Sir T. H. Holland, 163; Survey of India, Dr. C. Chree, F.R.S., 293; the Percy Sladen Trust Expedition to the Indian Ocean, J. Stanley Gardiner, F.R.S., 321; J. C. F. Fryer, 321; the Flora of the Presidency of Bombay, Dr. Theodore Cooke, 362; Natural History in India, 370
Infantilism from Chronic Intestinal Infection, on, Characterised by the Overgrowth and Persistence of Flora of the Nursling Period, Prof. C. A. Herter, 92
Infectious Diseases, a Manual of, Dr. E. W. Goodall and Dr. J. W. Washbourn, 454
Ingle (Herbert), Elementary Agricultural Chemistry, 93
Innes (Mr.), a Remarkable Transit of Jupiter's Third Satellite, 409
Insects: Papers and Reports on Insects, 81; die Metamorphose der Insekten, Dr. P. Deegener, 156; Papers on Molluscs and Insects, 263; Insect Stories, Vernon L. Kellogg, 344
Institution of Civil Engineers, "James Forrest" Lecture at, Road Motors and Problems Connected with Them, Colonel H. C. L. Holden, F.R.S., 323
Institution of Mechanical Engineers, the Electrification of Railways, John A. F. Aspinall at, 260
Institution of Mining and Metallurgy, 29, 299, 388
Institution of Naval Architects, the, 172
Interferometer, a Simple Fabry and Perot, Prof. James Barnes, 187
Internal-combustion Engine, the, H. E. Wimperis, Prof. E. G. Coker, 124
Internal-combustion Engines, their Theory, Construction, and Operation, R. C. Carpenter and H. Diederichs, Prof. E. G. Coker, 124
International Chart of the Heavens, 193
International Commission for Scientific Aëronautics, the, 354
International Congress of Chemistry, Seventh, 313
International Congress of Applied Chemistry, 412; Scientific Work of the, 470
International Union for Cooperation in Solar Research, Transactions of the, 134
Interstellar Space, Dispersion of Light in, Dr. Ch. Nordmann, 409
Intra-Mercurial Planet Problem, Prof. Campbell, 320; Dr. Perrine, 320
Ionisation in the Atmosphere, Prof. A. S. Eve, 36
Ionisation by Röntgen Rays, Dr. Charles G. Barkla, 187
Iron, Malleable Cast, S. Jones Parsons, 454
Iron and Steel Bars, Dimensional Changes produced in, by Magnetism, W. J. Crawford, 339
Iron and Steel Institute, the, 384
Iron and Steel, the Story of, J. Russell Smith, 126
Isaac (Miss F.), Spontaneous Crystallisation of Monochloracetic Acid and its Mixtures with Naphthalene, 28
Isothermal Layer of the Atmosphere, the, E. Gold, 68
Italy: le precipitazioni atmosferiche in Italia dal 1880 al 1905, 192; the Italian Earthquake of December 28, 1908, Dr. G. Martinelli, 445
Iyengar (N. V.), Meteorology of Mysore for 1907, 140
Iyer (V. Subramania), Sand-binding Plants, 198

Jackson (F. Hamilton), the Shores of the Adriatic, the Austrian Side, 274
Jacob (S. M.), Correlations of Areas of Matured Crop and the Rainfall and Certain Allied Problems in Agriculture and Meteorology, 89
Jaffé (G.), Electrical Conductivity of Pure Hexane, 409
Jarl (C. F.), the Quarrying of Cryolite, 470–1
Javelle (M.), Discovery of a New Comet, 1909*a*, 502
Jeffery (W. R.), Botanical Discoveries near Dover, 258
Jehu (Dr. T. J.), Glacial Deposits of Western Carnarvonshire, 148
Jemmett (Mr.), Parasites of the Cotton-worm, 197
Jenkinson (J. W.), Experimental Embryology, 451
Jensen (Dr. H. I.), Geology of the Mount Flinders and Fassifern District, Queensland, 479
Jentzsch (F.), Measurement of the Energy of Negative Electrons given out by Metals Heated in a Vacuum, 258
Johnson (C. M.), Rapid Methods for the Chemical Analysis of Special Steels, Steel-making Alloys and Graphite, 272
Johnson (Dr. George Lindsay), Photographic Optics and Colour Photography, including the Camera, Kinematograph, Optical Lantern, and the Theory and Practice of Image Formation, 185
Johnson (J. P.), the Ore Deposits of South Africa, 395
Johnson (Prof. T.), Black Scab or Potato-wart, 179; the Powdery Scab of the Potato *Spongospora subterranea*, 389
Johnston (Sir H.), Mr. Roosevelt's Projected Hunting Trip in East Africa, 285
Johnston-Lavis (Dr.), the Eruption of Vesuvius of April, 1906, 289
Jolibois (Pierre), Phosphides of Tin, 89
Jones (Prof. H. C.), Effect of Temperature on the Absorption of Certain Solutions, 444
Jones (L. M.), Practical Physics, 425
Jones (Ll. T.), Simple Apparatus to Measure the Diffusion of Gases, 438
Jones (O. T.), the Hartfell-Valentian Succession around Plynlimon and Pont Erwyd (North Cardiganshire), 419
Jones (R. L.), Analysis of the Records of the Anemograph at Madras Observatory, 18
Jones (Dr. William), Death and Obituary Notice of, 196, 255
Jordan (D. S.), the Scientific Aspects of Luther Burbank's Work, 337
Jordan (F. C.), Orbits of Spectroscopic Binaries, 229
Jourdain (Philip E. B.), the Relevance of Mathematics, 382
Jovitchitch (Dr. M. Z.), Experiments on the Action of the Silent Electric Discharge on Ethylene and Acetylene, 471
Joyce (T. A.), Steatite Figures (Nomori), 437
Julius (Prof.), Anomalous Refraction and Spectroheliograph Results, 50
Jupiter: Jupiter, Prof. Lowell, 353; Mr. Lampland, 353; a Remarkable Transit of Jupiter's Third Satellite, Mr. Innes, 409; the Perturbations of Brooks's Comet (1889 V) by Jupiter in 1886, Prof. Poor, 410; G. Deutschland, 410

Kapp (Prof. Gisbert), Électricité Industrielle, C. Lebois, 213; Transformers for Single and Multiphase Currents, 365; Heavy Electrical Engineering, H. M. Hobart, 391
Kay-Menzies (F. N.), Pollution of Sea-water, 413
Kearton (R.), the Adventures of Cock Robin and his Mate, 129
Keeling (B. F. E.), Climate Changes in Egypt, 319
Kellogg (Vernon L.), the Scientific Aspects of Luther Burbank's Work, 337; Insect Stories, 344
Kelman (Janet Harvey), Trees shown to the Children, 192
Kemp (S. W.), Photophores in Decapoda, 328
Kempf (Herr), Relation between the Magnitudes and Colours of Stars, 108
Kendall (Rev. H. G. O.), Palæolithic Implements, &c., from Hackpen Hill, Winterbourne Bassett, 118
Kent, the Water Supply of, with Records of Sinkings and Borings, William Whitaker, F.R.S., Dr. H. Franklin Parsons, Dr. H. R. Mill and Dr. J. C. Thresh, 432
Kenwood (Prof.), Pollution of Sea-water, 413
Kernbaum (Miroslaw), Chemical Action of the Penetrating Rays of Radium on Water, 149
Kernot (Prof. W. C.), Death and Obituary Notice of, 75
Kew: Index Kewensis Plantarum Phanerogamarum, 156; Bulletin of Miscellaneous Information, Royal Botanic Gardens, Kew, 1908, 246
Khartoum, Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Andrew Balfour, 495
Kinematographic Vision without Vibrations, the Problem of, C. de Proszynski, 480
King (Dr. A. S.), Chromospheric Calcium Lines in Furnace Spectra, 260
King (F. H.), Ventilation for Dwellings, Rural Schools, and Stables, 127
Kinship, Australian, Dr. A. Lang, 247
Kitchen (Dr.), Invertebrate Fauna of Uitenhage Beds in Cape Colony, 262
Kleeman (R. D.), Velocity of the Kathode Rays ejected by Substances exposed to the γ Rays of Radium, 86; Ionisation of Various Gases by Secondary γ Rays, 298; Nature of the Ionisation produced in a Gas by γ Rays, 328
Klein (P.), New Automatic Mercury Pump, 329
Kling (André), Determination of Added Water in Decomposed Milks, 270
Knecht (Prof.), Acid of Dicarboxylic Acids on Cellulose, 471
Knight (W. A.), Cassell's Elementary Geometry, 305
Knobel (E. B.), a Chinese Planisphere, 209
Knudsen (Martin), Molecular Effusion and Transpiration, 491
Kobold (Prof.), the Calculation of Cometary Orbits, 288; Discovery of a New Comet, 1909*a*, 502
Kœhler (A.), Syntheses by Means of the Mixed Zinc Organometallic Derivatives, 29
Kohlenhydrate und Fermente, Untersuchungen über, (1884–1908), Emil Fischer, 485
Köppen (Dr. W.), Study of the Upper Air, 408
Kraemer (Prof. H.), Modifications of Colour in Plants, 443
Krakatau, the New Flora of the Volcanic Island of, Prof. A. Ernst, 279
Kränzlin (Fr.), das Pflanzenreich, Scrophulariaceæ-Calceolarieæ, 424; das Pflanzenreich, Orchidaceæ-Cœlogyninæ, 424
Krause (K.), das Pflanzenreich, Araceæ-Monsteroideæ and Calloideæ, 424
Kritzinger (H. H.), Position of Daniel's (1907*d*) Comet, 169
Krüger (Dr. O.), Addition to the Atwood Machine, 227

la Baume-Pluvinel (A. de), Spectrum of the Comet 1908*c* (Morehouse), 149
la Grye (Bouquet de), the Flow of Rivers, 148
La Rosa (M.), Thermal Effects of a Musical Arc, 29, 89
Laboratory, the National Physical, during 1908, 109
Laborde (A.), Apparatus for Radio-active Measurements by the Electroscope Method, 228; the Condensation of the Radium Emanation, 509
Laby (T. H.), Counting of α Particles (Electrically Charged Helium Atoms) by Prof. E. Rutherford's Method, 348
Lampland (Mr.), Jupiter, 353
Lanchester (F. W.), Aërodonetics, 221
Landsborough (Rev. D.), the Gardens of Achnashie, Rosneath, 436
Lang (Dr. A.), Origin of the Terms of Human Relationship, 139; Australian Kinship, 247
Lang (Dr. J. Marshall), Death of, 283
Lang (Dr. W. H.), Alternation of Generations in Plants, 87
Lankester (Sir E. Ray, K.C.B., F.R.S.), the Need of a Great Reference Library of Natural Science in London, 427
Larard (C. E.), Cylindrical Specimens Twisted to Destruction, 348
Latham (Baldwin), Percolation, Evaporation, and Condensation, 298
Lathe Design for High- and Low-speed Steels, Prof. John T. Nicholson and Dempster Smith, 33
Lau (Dr.), Measures for Double Stars, 200
Laurie (Principal A. P.), Electromotive Force of Iodine Concentration Cells with One Electrode Saturated with Iodine, 59
Laveran (A.), *Trypanosome pecaudi, T. dimorphon*, and *T. congolense*, 179
Law (E. F.), Alloys and their Industrial Applications, 243

Lawson (Andrew C.), the California Earthquake of April 18, 1906, 10
le Chatelier (H.), Leçons sur le Carbone, la Combustion, les Lois chimiques, 331
Lead Poisoning, K. Goadby, 472
Lead Poisoning, Experimental, K. Goadby, 436
Leake (H. Martin), the Experimental Breeding of Indian Cottons, Part ii., on Buds and Branching, 150
Leaves, the Colours of, George Abbott, 429
Lebedew (Prof.), the Apparent Dispersion of Light in Space, 169
Lebois (C.), Électricité Industrielle, 213
Leduc (A.), Molecular Volumes, Densities, and Atomic Weights, 59; Calculation of Molecular Weights by Means of Vapour Densities, Toluene, 180; Internal Pressure in Gases, 449
Lefèvre (J.), Influence of Nutritive Media on Development of the Embryos of *Pinus pinea*, 480
Leffingwell (Dr. Albert), the Vivisection Controversy, 63
Léger (Louis), Costiasis and its Treatment in Young Trout, 389; the Signification of the Rhabdospora, Supposed Parasitic Sporozoa in Fishes, 480
Leipzig, a Course of Lectures Delivered in the University of, Mental Pathology in its Relation to Normal Psychology, Dr. Gustav Störring, 216
Leishman (Lieut.-Colonel W. B.), Transmission of Tick Fever, 349
Lematte (L.), Determination of Physical Constants of the Peptones, 59
Length, a Wave-length Comparator for Standards of, Dr. A. E. H. Tutton, 477; the Use of Wave-length Rulings as Defining Lines on Standards of Length, Dr. A. E. H. Tutton, 478
Lepape (Adolphe), Radio-activity of the Thermal Springs of Bagnères-de-Luchon, 180
Lepidoptera: the Genitalia of the Noctuidæ of the Lepidoptera of the British Islands, F. M. Pierce, 246; Catalogue of the Lepidoptera Phalænæ in the British Museum, Sir George F. Hampson, Bart., 338
Levi-Civito (Prof.), the Rings of Saturn, 439
Levy (D. M.), the Bessemerising of Hardhead, 388
Lewis (A. L.), Stone Circles in Ireland, 359
Leyst (Dr. E.), Meteorological Observations made in 1907 at Moscow Observatory, 258
Library of Natural Science, the Need of a Great Reference, in London, Sir E. Ray Lankester, K.C.B., F.R.S., 427
Lieckfeld (G.), Oil Motors, 246
Light, the Apparent Dispersion of, in Space, Prof. Lebedew, 169
Light, Dispersion of, in Interstellar Space, Dr. Ch. Nordmann, 409
Lightning and the Churches, Alfred Hands, 228
Lignum Nephriticum, Fluorescence of, Charles E. Benham, 159; Dr. O. Stapf, F.R.S., 218; John H. Shaxby, 248
Lillie (F. R.), the Development of the Chick, 271
Linnean Society, 87, 148, 269, 359, 448, 478; Medal Awards, 375
Linnean Society, New South Wales, 479
Lister (J. J., F.R.S.), a Student's Text-book of Zoology, Vol. iii., the Introduction to Arthropoda, the Crustacea, and Xiphosura, 361
Lloyd (Captain R. E.), Rats of Calcutta, 499
Local Government Board, 1906–7, Thirty-sixth Annual Report of the, 203
Lockyer (Sir Norman, K.C.B., F.R.S.), the Botallek Circles, 97; the Uses and Dates of Ancient Temples, 340
Lockyer (Dr. William J. S.), Astronomische Ortsbestimmung im Ballon, Prof. Adolf Marcuse, 244; Cloud Photographs from a Balloon, 310
Locy (Prof. W. A.), Biology and its Makers, with Portraits and other Illustrations, 95
Lodge (Sir Oliver, F.R.S.), Suggested Effect of High-tension Mains, 67; the Gravitative Pull upon the Moon, 307; Selective Wireless Telegraphy, 381
London Institution, the, 283
London Institution, the Royal Society of Arts and the, 100
London, the Need of a Great Reference Library of Natural Science in, Sir E. Ray Lankester, K.C.B., F.R.S., 427
Long (Sydney H.), "Blowing" Wells, 339
Longman (Sybil), the "Dry-rot" of Potatoes, 148
Loud (F. H.), Meteorological Statistics of the Colorado College Observatory for 1907, 49
Louis (Prof. Henry), Practical Coal Mining, 242
Love (Prof. A. E. H., F.R.S.), the Yielding of the Earth to Disturbing Forces, Lecture at Royal Society, 253
Lowe (Messrs. F. C., and Son), Artificial Dew- and Rain-ponds made by, 437
Lowell (Prof. Percival), Mars as the Abode of Life, 212; the "Original" Canals of the Martian Doubles, 260; Development of Martian Canals, 288; Mars, 353; Jupiter, 353
Lucas (F. A.), Length of Skeletons of Great Whales, 104
Ludendorff (Dr.), Common Motions of the Principal Ursæ Majoris Stars, 141
Luders (L.), Müller's Ostracod Crutacean *Gigantocypris agassizi*, 174
Ludgate (Percy E.), Proposed Analytical Machine, 89
Lugard (Major and Mrs. E. J.), Flora of Ngamiland, 351
Lunar Eclipse, June 3, the Recent, MM. Borrelly and Coggia, 502; J. H. Elgie, 503
Luplau-Janssen (Herr), Measures for Double Stars, 200
Lushington (A. W.), Rate of Growth of Palms, 351
Lydekker (R.), Rock-engravings in South Africa, Corr., 438
Lyle (Prof.), Theory of the Alternate-current Generator, 328
Lyra, the Gases of the Ring Nebula in, Prof. Bohuslav Brauner, 158

McAdie (Prof. A. G.), Suggestion for Reform of Meteorological Methods, 227
MacClintock (W.), the Blackfeet Indians of Montana, 298
M'Conachie (William), Close to Nature's Heart, 129
Macdonald (Mr.), Rainfall Conditions of the Transvaal, 198
McDougall (Arthur), the Imperial Side of the Fuel Question, 309
McDougall (William), an Introduction to Social Psychology, 245
MacDowall (Alex. B), the Dryness of Winter (1908–9), 40; the Greenwich Winter of 1908–9, 218
Macfadyen (Allan), the Cell as the Unit of Life, and Other Lectures Delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, 123
Macfarlane (J. M.), das Pflanzenreich, Sarraceniaceæ, 424; Nepenthaceæ, 424
McGlone (B.), Origin of the Lung of Ampullaria, 382
McIntire (A. L.), the Production of "Sal" *Shorea robusta*, 317
McKendrick (Prof. John G., F.R.S.), a Winter Retreat, 8; Are the Senses ever Vicarious? 38; The Gramophone as a Phonautograph, 188
Mackenzie (Dr. A. P.), *Strophanthus sarmentosus*, its Pharmacological Action and Use as an Arrow-poison, 328
Mackenzie (Dr. Duncan), the Nuraghi of Sardinia, 226
McLennan (Evan), the Gravitative Strain upon the Moon, 276
McLennan (Prof. J. C.), on the Relation of "Recoil" Phenomena to the Final Radio-active Product of Radium, 490
Magnesium in Hydrogen, Spectrum of, E. E. Brooks, 410
Magnetism: Rotation of the Electric Arc in a Radial Magnetic Field, J. Nicol, 27; an Electromagnetic Problem, Prof. D. F. Comstock, 39; Norman R. Campbell, 39; Is there a Vertical Magnetic Force in a Cyclone? J. R. Ashworth, 40; Magnetic Properties of Certain Copper Alloys, A. D. Ross and R. C. Gray, 59; Low-temperature Experiments in Magnetism, J. G. Gray and Hugh Higgins, 59; New Vessel to Continue the Magnetic Survey of the World, 78; Magnetic Rays, 80; Self-demagnetising Factor of Bar Magnets, Prof. S. P. Thompson and E. W. Moss, 87; Lieut. Shackleton's Antarctic Expedition, the South Magnetic Pole, Dr. C. Chree, F.R.S., 130; Electromotive Forces of Magnetisation, V. Posejpal, 149; Magneto-kathode Rays, M. Gouy, 149; Integration of the Equations of Motion of an Electron Describing an Orbit about an Ion in a Magnetic Field, Prof. Augusto Righi, 168; Meteorological and Magnetical Report of the Royal Cornwall Polytechnic Society, 287; Department of Commerce and Labour, Coast and Geodetic Survey, United States Magnetic Tables and Magnetic Charts for 1905, L. A. Bauer, Dr. C.

Chree, F.R.S., 293; Magnetic Survey of the Dutch East Indies, 1903–7, Dr. W. van Bemmelen, Dr. C. Chree, F.R.S., 293; Survey of India, Dr. C. Chree, F.R.S., 293; Dimensional Changes Produced in Iron and Steel Bars by Magnetism, W. J. Crawford, 339; Death of Dr. G. von Neumayer, For.Mem.R.S., 375; Obituary Notice of, Hy. Harries, 402; Corr., 439; Magnetic Storm at Kew, 376; the Magnetic Survey Yacht *Carnegie*, 465; the Norwegian Aurora Polaris Expedition, 1902–3, Vol. i., on the Cause of Magnetic Storms and the Origin of Terrestrial Magnetism, Kr. Birkeland, 410; Effect of Temperature on the Hysteresis Loss in Iron in a Rotating Field, W. P. Fuller and H. Grace, 419; Meteorological and Magnetical Observations at Stonyhurst College Observatory for 1908, 438; Solar Activity and Terrestrial Magnetic Disturbances, Dr. L. A. Bauer, 444

Maiden (J. H.), Botanic Gardens and Government Domains in Sydney, New South Wales, 436

Maigre (Étienne), the Stabilisation of Aëroplanes, 223

Maigre (E.), Geotropism and the Statolith Theory, 286

Mailhe (A.), New General Method for the Preparation of the Alcoholic Amines, 209

Mairey (A.), la France et ses Colonies au Début au XXe Siècle, 368

Makower (W.), Expulsion of Radio-active Matter in the Radium Transformations, 238

Malaria: "Millions" and Mosquitoes, H. A. Ballou, 16; the Campaign against Malaria, Prof. Ronald Ross, F.R.S., at Royal Institution, 415

Malden (Dr. W.), Problems of Apiculture, 356

Maler (T.), Memoirs of the Peabody Museum of American Archæology and Ethnology, Harvard University, Explorations in the Department of Petén, Guatemala, and Adjacent Region, 160

Mall (Prof. Franklin P.), Relative Size of the Frontal Lobe of the Brain, 166

Malleable Cast Iron, S. Jones Parsons, 454

Mallock (A.), Best Conditions for Photographic Enlargement of Small Solid Objects, 29

Mallock (A., F.R.S.), Utilisation of Energy Stored in Springs, 358

Mallock (H. A. R.), Construction and Wear of Roads, 141

Man, the Production of Prolonged Apnœa in, W. G. Royal-Dawson, 8; Dr. H. M. Vernon, 39

Man in the Light of Evolution, Dr. J. M. Tyler, 275

Manchester Literary and Philosophical Society, 119, 209, 328, 359, 388; Wilde Lecture at, the Influence of Moisture on Chemical Change, Dr. H. Brereton Baker, F.R.S., 175

Mantoux (Charles), the Intra-dermo-reaction to Tuberculin in the Treatment of Tuberculosis, 240

Manufacture of Paper, the, R. W. Sindall, 422

Marconi (Commendatore G.), Transatlantic Wireless Telegraphy, Discourse at Royal Institution, 233, 264

Marcuse (Prof. Adolf), Astronomische Ortsbestimmung im Ballon, 244

Marine Biology: Relations of Marine Organisms to Light, Prof. B. Moore, 16; Sex in Sea-urchins Obtained by Experimental Parthenogenesis, Yves Delage, 29; Migration of the Thread-cells of Moerisia, C. L. Boulenger, 88; Specimen of Pelagothuria from the Seychelles, J. C. Simpson, 88; Some Marine and Fresh-water Organisms, 174; Müller's Ostracod Crustacean *Gigantocypris agassizi*, L. Luders, 174; Gigantocypris and the *Challenger*, Dr. W. T. Calman, 248; Amphipoda Hyperiidea of the *Sealark* Expedition to the Indian Ocean, A. O. Walker, 269; Marine Mollusca of the *Sealark* Expedition, Dr. J. Cosmo Melvill, 269; Pecten, W. J. Dakin, 273; Photophores in Decapoda, S. W. Kemp, 328; a Problematical Organism Thrown up during a Storm in Bass Strait, Prof. Baldwin Spencer, 350; Apical Pigment-spots in the Pluteus of *Echinus miliaris*, F. H. Gravely, 359; Marine Biology in the Tortugas, 382; Annual Breeding Swarm of the Atlantic Palolo, Dr. A. G. Mayer, 382; Experiments on the Scyphomedusan *Cassiopea xamachana*, Dr. Mayer, 382; Origin of the Lung of Ampullaria, Prof. W. K. Brooks and B. McGlone, 382; Significance of the Conspicuousness of the Coral-reef Fishes of the Tortugas, Prof. Reighard, 382

Mars: Mars as the Abode of Life, Percival Lowell, 212; the "Original" Canals of the Martian Doubles, Prof. Lowell, 260; Development of Martian Canals, Prof. Lowell, 288; Mars, Prof. Lowell, 353

Marshall (Arthur), Dew-ponds, 429

Marshall (Dr. Francis H. A.), Experimental Zoology, Dr. Hans Przibram, 2

Marsupialia, the Ancestry of the, Prof. Jas. P. Hill, 159; the Writer of the Note, 159

Martel (E. A.), la Côte d'Azur Russe (Riviera du Caucase), 40; Phenomenon of Intermittence of the *Gouffre de Poudak*, 449

Martinelli (Dr. G.), the Italian Earthquake of December 28, 1908, 445

Marzell (Dr. H.), Plants with Magic Qualities, 166

Massarini (Dr. J.), Discussion of the Winds at Rome, 17

Materials, the Strength of, Prof. Arthur Morley, 64

Mathematics: Geometry, Theoretical and Practical, W. P. Workman and A. G. Cracknell, 7; a Course of Pure Mathematics, G. H. Hardy, 36; Lagrange's Equations of Motion and Elementary Solutions of Gyrostatic Problems, Prof. A. Gray, 59; Mathematical Society, 87, 299, 3[illegible] 478; Theorems on the Twisted Cubic, M. J. Conran, 88; Proofs of Generalised Fourier Sum Theorems in Trigonometrical and in Bessel Functions, Prof. W. McF. Orr, 88; Proposed Analytical Machine, Percy E. Ludgate, 89; Uniformity in Mathematical Notation and Printing, 102; Surfaces having a Family of Helices as One Set of Lines of Curvature, Eva M. Smith, 140; the Graphical Determination of Fresnel's Integrals, J. H. Shaxby, 269; Practical Solid Geometry, Rev. P. W. Unwin, 305; Cassell's Elementary Geometry, W. A. Knight, 305; Œuvres complètes de Christian Huyghens publiées par la Société hollandaise des Sciences, 307; the Teaching of Geometry, Prof. George M. Minchin, F.R.S., 373; the Relevance of Mathematics, Philip E. B. Jourdain, 382; Grundlagen der Geometrie, D. Hilbert, 394; School Algebra, W. E. Patterson, 426; Traité de Mathématiques générales a l'usage des Chimistes, Physiciens, Ingénieurs, et des Élèves des Facultés des Science, Prof. E. Fabry, 488; the Nautic-Astronomical and Universal Calculator, R. Nelting, 490; the Arthur Wright Electrical Device for Evaluating Formulæ and Solving Equations, Dr. Russell and Arthur Wright, 509

Mathewson (Dr. C. H.), First Principles of Chemical Theory, 453

Mathias (E.), the Density of Acetylene, 299

Matignon (Camille), Equilibria between the Liquid and Solid Phases in the Mixtures $NaCl+H_2O$, 59

Mattingley (A. H. E.), Mallee-fowl (*Lipoa ocellata*), 113

Maxim (Sir Hiram S.), Artificial and Natural Flight, 221

May (Prof. Walther), Ernst Haeckel, 126

Mayer (Dr. A. G.), Annual Breeding Swarm of the Atlantic Palolo, 382; Experiments on the Scyphomedusan *Cassiopea xamachana*, 382

Meade (E. S.), the Story of Gold, 306

Mechanics: Mechanics of Engineering, Prof. Irving P. Church, 33; Utilisation of Energy Stored in Springs, A. Mallock, F.R.S., 358

Medicine: the Intra-dermo-reaction to Tuberculin in the Treatment of Tuberculosis, Charles Mantoux, 240; an Inquiry Concerning Scientific and Medical Journals, Prof. Karl Pearson, F.R.S., 276; *Strophanthus sarmentosus*, its Pharmacological Action and Use as an Arrow-poison, Sir Thomas Fraser and Dr. A. P. Mackenzie, 328; Death and Obituary Notice of Prof. Heinrich von Ranke, 350; Festschrift der Physikalisch-medizinischen Societät zu Erlangen zur Feier ihres 100 jährigen Bestehens am 27 Juni, 1908, 411; Sitzungsberichte der Physikalisch-medizinischen Societät in Erlangen, 411

Mees (Dr. C. E. Kenneth), the Photography of Coloured Objects, 489

Melbourne Observatory, the, Mr. Baracchi, 51

Meldola (Prof. Raphael, F.R.S.), Education and Research in Applied Chemistry, Address at Society of Chemical Industry, 413; Darwin and Modern Science, Essays in Commemoration of the Centenary of the Birth of Charles Darwin and of the Fiftieth Anniversary of the Publication of the "Origin of Species," 481

Melland (Charles H.), the Sense of Proximity, 456

Mellor (Mr.), Adsorption and Dissolution of Gases by Silicates, 385
Melvill (Dr. J. Cosmo), Marine Mollusca of the *Sealark* Expedition, 269
Mental Pathology in its Relation to Normal Psychology, a Course of Lectures delivered in the University of Leipzig, Dr. Gustav Störring, 216
Mercalli (Prof. G.), the Calabrian Earthquake of October 23, 1907, 318
Mercury, Diameter and Position of, Prof. Stroobant, 200
Mercury as an Evening Star, 320
Merrill (E. D.), Philippine Species of Garcinia, 286
Meslin (Georges), Polarisation by Lateral Diffusion, 299
Metallurgy: the Story of Iron and Steel, J. Russell Smith, 126; the Manufacture of Basic Steel, 135; Melting Point of Iron, Prof. Carpenter, 140; Alloys and their Industrial Applications, E. F. Law, 243; a Process of Making Ribbon Metals, Messrs. Strange and Graham, Ltd., 348; Cylindrical Specimens Twisted to Destruction, C. E. Larard, 348; the Iron and Steel Institute, 384; the Preservation of Iron and Steel, Allerton S. Cushman, 384; Physical Tests for Protective Coatings for Iron and Steel, J. Cruickshank Smith, 384; Solubility of Steel in Sulphuric Acid, E. Heyn and O. Bauer, 384; Chemical Physics Involved in the Decarburisation of Iron-carbon Alloys, W. H. Hatfield, 385; Ageing of Mild Steel and the Influence of Nitrogen, C. E. Stromeyer, 385; Determination of Tungstic Acid in Low-grade Wolfram Ores, H. W. Hutchin and F. J. Tonks, 388; Cupellation Experiments, the Thermal Properties of Cupels, C. O. Bannister and W. N. Stanley, 388; the Bessemerising of Hardhead, D. M. Levy and D. Ewen, 388; the Scalding and Sweating of Copper Battery Plates, S. F. Goddard, 388; Malleable Cast Iron, S. Jones Parsons, 454; Production of Pure Tellurium from its Ores, Prof. R. Schelle, 470
Metcalf (Rev. Joel), Photographs of Morehouse's Comet, 1908*c*, 108
Meteorology: Barometric Oscillation, W. H. Dines, F.R.S., 8; Weather for the Week ending February 27, 15; Discussion of the Winds at Rome, Dr. I. Massarini, 17; Analysis of the Records of the Anemograph at Madras Observatory, R. L. Jones, 18; the Dryness of Winter (1908–9), Alex. B. MacDowall, 40; Is there a Vertical Magnetic Force in a Cyclone? J. R. Ashworth, 40; Meteorological Statistics of the Colorado College Observatory for 1907, F. H. Loud, 49; the Isothermal Layer of the Atmosphere, E. Gold, 68; Temperature of the Upper Atmosphere, Dr. C. Chree, F.R.S., 127, 397; Upper Air Temperatures, E. Gold, 217; the Temperature of the Upper Atmosphere, W. H. Dines, F.R.S., 455; Charles J. P. Cave, 456; Kite Flights in India and Neighbouring Sea Areas during the South-west Monsoon Period of 1907, J. H. Field, 77; Correlations of Areas of Matured Crop and the Rainfall and Certain Allied Problems in Agriculture and Meteorology, S. M. Jacob, 89; Discussion of the Temperature at Rome, 1855–1904, Dr. F. Eredia, 106; Mean Annual Rainfall of Wales and Monmouthshire, G. B. Williams, 106; Royal Meteorological Society, 119, 298, 387; Wind-waves in Water, Sand, and Snow, Dr. Vaughan Cornish, 119; Lieut. Shackleton's Antarctic Expedition, Meteorological Observations, W. H. Dines, F.R.S., 130; Meteorology of Mysore for 1907, N. V. Iyengar, 140; Minimum Thermometer and Severe Cold, A.E. H. Bott, 140; Tidal Wave in the New Hebrides, 164; Correlation in Seasonal Variation of Climate, Gilbert Walker, F.R.S., 167; le precipitazioni atmosferiche in Italia dal 1880 al 1905, 192; Mirage at Grimsby, 196; Rainfall Conditions of the Transvaal, Mr. Macdonald, 198; Weather for the Week ending April 10, 199; International Balloon Observations made by the Bavarian Meteorological Service, 199; the Greenwich Winter of 1908–9, Alex. B. MacDowall, 218; General Results of the Meteorological Cruises of the *Otaria* on the Atlantic in 1905, 1906, and 1907, L. Teisserenc de Bort and Prof. A. Lawrence Rotch, 219; Dew-ponds, Geo. Hubbard, 223; Prof. J. B. Cohen, 309; Arthur Marshall, 429; L. Gibbs, 458; Suggestion for Reform of Meteorological Methods, Prof. A. G. McAdie, 227; Weather Bureau of the Philippine Islands, Report for 1906, 227; Death and Obituary Notice of Captain Henry Toynbee, 256; Meteorological Observations made in 1907 at Moscow Observatory, Dr. E. Leyst, 258; April Sunshine, 285; Distribution of the Polar Ice during 1908, 287; Meteorological and Magnetical Report of the Royal Cornwall Polytechnic Society, 287; Percolation, Evaporation and Condensation, Baldwin Latham, 298; Meteorological Conditions in the Philippine Islands, 1908, Rev. José Algué, 299; Cloud Photographs from a Balloon, Dr. William J. S. Lockyer, 310; Climate Changes in Egypt, B. F. E. Keeling, 319; Prospect of a Short Water Supply during the Coming Summer, Rev. F. C. Clutterbuck, 352; Method of Ventilating the Instrument during Ascent, Prof. Assmann, 354; Theoretical Applications of Upper-air Observations, Prof. Bjerknes, 355; Results of Theodolite Observations on *Ballons sondes* at Trappes, Teisserenc de Bort, 355; Meteorology of the Dutch East Indies, 356; Death of Dr. G. von Neumayer, For.Mem.R.S., 375; Obituary Notice of, Hy. Harries, 402; Corr., 439; Report of Bombay and Alibag Observatories for 1908, 379; the Anticyclonic Belt of the Northern Hemisphere, Col. H. E. Rawson, 387; May Sunshine, 407; Study of the Upper Air, Dr. W. Köppen, 408; Artificial Dew- and Rain-ponds made by Messrs. F. C. Lowe and Son, 437; Report of the Sonnblick Society for 1908, 437; Meteorological and Magnetical Observations at Stonyhurst College Observatory for 1908, 438; the Hevelian Halo, Prof. C. S. Hastings, 444
Meteors: the Meteoric Fireball of February 22 and its Streak, W. F. Denning, 13; the Meteoric Streak of February 22, W. F. Denning, 42; Fireball of February 22, W. F. Denning, 69; Fall of an Aërolite in Mokoia, New Zealand, on November 26, 1908, W. F. Denning, 128; April Meteors, John R. Henry, 188; Persistent Trail of a Meteor on March 14, Edward J. Steer, 248; the Meteoric Shower of Halley's Comet, W. F. Denning, 259; the Ensuing Return of the Perseid Meteors, 468
Metrology: Remarks on a Set of Standards of Length, presented by M. Johansson, M. Carpentier, 209; British and American Customary and Metric Legal Measures for Commercial and Technical Purposes, N. Foley, 367; a Wave-length Comparator for Standards of Length, Dr. A. E. H. Tutton, 477; the Use of Wave-length Rulings as Defining Lines on Standards of Length, Dr. A. E. H. Tutton, 478
Meyer (F. N.), Results of Destruction of Forests in Northern China, 17
Meyer (Prof.), the Two Living Secret Languages Current in Ireland, Shelta and Béarlagar na Saor, 106
Meynier (J.), Catalytic Action produced by Moisture, 470
Michelson (Prof. A. A.), the Ruling of Diffraction Gratings, 444
Microscopy: Apparatus for Measurements of the Defining Power of Objectives, J. de Graaff Hunter, 28; Royal Microscopical Society, 59, 178, 327, 448; Simple Method of Illuminating Opaque Objects, J. E. Stead, F.R.S., 168; a Stage Goniometer for Use with the Dick Pattern of Microscope, Prof. H. L. Bowman, 178; Method of Mounting Rotifers and Protista in Canada Balsam, Rev. Eustace Tozer, 225; the Microscope in Engineering, Walter Rosenhain, 250; Cycloloculina, a New Genus of Foraminifera, E. Heron-Allen and A. Earland, 285; a Metallic Filter with Regular Interstices of Variable Dimensions, Émile Gobbi, 300; Simple Method of Finding Indices of Refraction of Liquids under the Microscope, Dr. Enrico Clerici, 319; Microscope Objectives of a New Formula, C. Baker, 320; Photographic Registration of Brownian Trajectories in Gases, M. de Broglie, 329; Spore-formation in the Disporic Bacteria, C. Clifford Dobell, 435; Mikroskopischer und physiologischer Praktikum der Botanik für Lehrer, G. Müller, 452
Miers (Dr. H. A.), Spontaneous Crystallisation of Monochloracetic Acid and its Mixtures with Naphthalene, 28
Mildbraed (J.), das Pflanzenreich, Stylidiaceæ, 424
Mill (Dr. H. R.), the Water Supply of Kent, with Records of Sinkings and Borings, 432
Millochau (G.), Contribution to the Study of Radiation, 149
Mimicry: Forms, Markings, and Attitudes in Animals and Plant-life, Dr. Arthur Willey, F.R.S., 247

Minakata (Kumagusu), Baskets Used in Repelling Demons, 369
Minchin (Prof. George M., F.R.S.), the Teaching of Geometry, 373
Mineralogy: the Glenboig Fireclay: its Halloysite and Sideroplesite, Prof. J. W. Gregory, 148; Tuesite, Prof. Gregory, 148; Mineralogical Society, 178; Identity of Guarinite and Hiortdahlite, Dr. F. Zambonini, 178; Dr. G. T. Prior, 178; the Mineral Kingdom, Prof. R. Brauns, 275; Artificial Production of Precious Stones, Jacques Boyer, 408; Mineralien-Sammlungen, Dr. Wolfgang Brendler, 423; the Quarrying of Cryolite, C. F. Jarl, 470–1
Minerals: Sketch of the Mineral Resources of India, Sir T. H. Holland, 163; the Electrostatic Separation of Minerals, T. Cook, 178
Mining: Practical Coal Mining, Prof. Henry Louis, 242; the Lahat "Pipe," J. B. Scrivenor, 298; Valuation of Mining Areas on the Rand, W. Fischer Wilkinson, 299; the "Wholesale" Idea in Gold Mining, W. R. Feldtmann, 299; Pitchblende from Trenwith Mine, Francis Fox, 349
Minot (Prof. Charles S.), the Problem of Age, Growth, and Death, a Study of Cytomorphosis, 335
Mixter (G.), Brown-bear Hunting in Alaska, 378
Miyoshi (Dr. M.), Causes of Autumnal Colour Effect in Leaves of *Terminalia catappa*, 465
Modelling: Clay Modelling in Manual Training from Plan, Elevation, and Section, F. W. Farrington, 36; Clay Modelling in Manual Training, Scholar's Handbook, 36
Moir (J.), Spectrum of the Ruby, 360
Moisture, the Influence of, on Chemical Change, Wilde Lecture at Manchester Literary and Philosophical Society, Dr. H. Brereton Baker, F.R.S., 175
Mokoia, Fall of an Aërolite in, New Zealand, on November 26, 1908, W. F. Denning, 128
Molecular Effusion and Transpiration, Martin Knudsen, 491
Molisch (Prof. H.), a Warm-water Bath as Means of Forcing Plants, 501
Molluscs and Insects, Papers on, 263
Molyneux (A. J. C.), Karroo System in Northern Rhodesia and its Relation to the General Geology, 118
Moog (R.), Variations of Dehydrations of the Organism with Altitude, 510
Moon, the Gravitative Strain upon the, Evan McLennan, 276; Sir Oliver Lodge, F.R.S., 307
Moon, Photographs of the Earthshine on the, M. Quénisset, 141
Moon's Position, a Double-image Cœlostat for Determining the, Mr. Wade, 468
Moore (Prof. B.), Relations of Marine Organisms to Light, 16
Moore (Prof. J. W.), Death of, 103
Moore (Mr.), Adsorption and Dissolution of Gases by Silicates, 385
Moral Superiority among Birds, A. R. Horwood, 40
Morance (M.), Purification of Hydrated Sulphuric Acid from Arsenic by Freezing, 180
Morbology: "Millions" and Mosquitoes, H. A. Ballou, 16; Mosquitoes and Malaria at Port Said, E. H. Ross, 286; the Campaign against Malaria, Prof. Ronald Ross, F.R.S., at Royal Institution, 415; Hæm-agglutinins, Hæm-opsonins, and Hæm-lysins in the Blood from Diseases in Man, L. S. Dudgeon, 58; on Infantilism from Chronic Intestinal Infection, Characterised by the Overgrowth and Persistence of Flora of the Nursling Period, Prof. C. A. Herter, 92; *Trypanosoma pecaudi*, *T. dimorphon*, and *T. congolense*, A. Laveran, 179; Incidence of Cancer in Mice of Known Age, Dr. E. F. Bashford and Dr. J. A. Murray, 387; Invisible Pathogenic Micro-organisms and the Physical Proofs of their Existence, A. Chauveau, 209; Kleine's Observations on the Period during which the Tsetse-fly was Capable of Transmitting a Trypanosome Infection, Sir David Bruce, 315; Latency in Infectivity of Tsetse-flies, Colonel Sir David Bruce, 436; Transmission of Tick Fever, Lieut.-Colonel W. B. Leishman, 349; the Urine in Diseases of the Pancreas, P. J. Cammidge, 386; Experimental Lead Poisoning, K. Goadby, 436; Lead Poisoning, K. Goadby and Dr. F. W. Goodbody, 472; the Transmission of "Spotted Fever," Dr. Ricketts, 436; Economic Loss to United States Through Disease-carrying Insects, Dr. L. O. Howard, 448; a Manual of infectious Diseases, Dr. E. W. Goodall and Dr. J. W. Washbourn, 454; Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, Andrew Balfour, 495
Moreau (Georges), the Charge of a Negative Ion of a Flame, 389
Morehouse, Comet, 1908*c*, 108; Prof. F. Ristenpart, 260; Photographs of Morehouse's Comet, 1908*c*, Rev. Joel Metcalf, 108; Position of Morehouse's (1908*c*) Comet, Dr. Ebell, 169; Observations made at Meudon Observatory on Morehouse's Comet, H. Deslandres, A. Bernard, and J. Bosler, 179; Observations of Comet Morehouse, Mr. Motherwell, 200; the Spectrum of Morehouse's Comet, Prof. Hartmann, 380
Morgan (Prof. C. Lloyd, F.R.S.), Functions of a University, 176
Morgan (Prof. J. Livingston R.), the Elements of Physical Chemistry, 363
Morgulis (S.), Capacity for Regeneration of One of the Brittle-stars, 465
Morley (Prof. Arthur), the Strength of Materials, 64
Morozoff's Theory of the Constitution of Atoms, Radio-activity in Relation to, Prof. B. de Szyszkowski, 276
Morphology: Einleitung in die experimentelle Morphologie der Pflanzen, Dr. K. Goebel, 61; Beiträge zur Naturgeschichte des Menschen, Dr. Gustav Friedenthal, Prof. G. Elliot Smith, F.R.S., 211; Morphology of the Enteropneusta, Dr. Arthur Willey, F.R.S., 218; the Origin of Vertebrates, Dr. Walter Holbrook Gaskell F.R.S., 301; Gaskell's "Origin of Vertebrates," Dr. W. H. Gaskell, F.R.S., 428; the Germ-layer Theory, J. Stanley Gardiner, F.R.S., 428; the Reviewer, 428
Morse (Albert P.), Biologia Centrali-Americana, Orthoptera, Vol. ii., Tettiginæ, 241
Mortimer (F. J.), the Oil and Bromoil Processes, 67; the "Bromoil" Process, 324
Mosquitoes and Malaria at Port Said, E. H. Ross, 286
Mosquitoes, "Millions" and, H. A. Ballou, 16
Moss (E. W.), Self-demagnetising Factor of Bar Magnets, 87
Moss (J.), Quantity of the Alkaloid Taxine in Yew, 88
Motherwell (Mr.), Observations of Comet Morehouse, 200
Motors: Motor-car Mechanism and Management, W. Poynter Adams, 33; the Aero and Motor Boat Exhibition, 111; Oil Motors, G. Lieckfeld, 246; Road Motors and Problems Connected with Them, "James Forrest" Lecture at Institution of Civil Engineers, Colonel H. C. L. Holden, F.R.S., 323; Method for Rendering Motor-car Escape Gas Odourless, Dr. M. Frenkel, 413
Moulton (Prof.), Stellar Evolution, 79; Changes in the Figure and Dimensions of the Sun, 439
Mount Wilson Solar Observatory Report, Prof. Hale, 260
Moureu (Charles), Radio-activity of the Thermal Springs of Bagnères-de-Luchon, 180
Mowat (Magnus), Recent Grain-handling and Storing Appliances at the Millwall Docks, 50
Muff (H. B.), the Cauldron Subsidence of Glen Coe and the Associated Igneous Phenomena, 448
Muir (M. M. Pattison), Death and Obituary Notice of Prof. Julius Thomsen, 46
Müller (Herr), Relation between the Magnitudes and Colours of Stars, 108
Müller (G.), Mikroskopischer und physiologischer Praktikum der Botanik für Lehrer, 452
Munger (Captain F. M.), Volcanic Island near Bogloslof, Alaska, 226
Munroe (Prof. C. E.), Detonation of Gun-cotton, 443
Muntz (A.), Relations between the Permeability of Soils and their Aptitude for Irrigation, 449
Murray (Sir John), die Grundproben der "Deutschen Tiefsee-Expedition," 486
Murray (Dr. J. A.), Incidence of Cancer in Mice of Known Age, 387
Museums: Synopsis of the British Basidiomycetes, a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, British Museum, Worthington G. Smith, 184; the Natural History Museum, Profs. J. C. Ewart, F.R.S., A. Sedgwick, F.R.S., Sydney J.

Hickson, F.R.S., and Gilbert C. Bourne, 229; the Natural History Museum, 254; Catalogue of the Lepidoptera Phalænæ in the British Museum, Sir George F. Hampson, Bart., 338
Musiklehre, Physikalische, Dr. Hermann Starke, 338
Muthesius (Karl), Goethe und Pestalozzi, 368
Mycology: Synopsis of the British Basidiomycetes: a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, British Museum, Worthington G. Smith, 184
Myers (J.), the Gypsy Poison Drab, 77
Mythology: the Golden Fleece, Dr. Felix Oswald, 96

Nagaoka (H.), the Complex Structure of Some Lines in Spectrum of Mercury, 319
Nandi, the, their Language and Folklore, A. C. Hollis, 249
National Antarctic Expedition, 1901–4, Album of Photographs and Sketches, 460
National Physical Laboratory during 1908, the, 109
Natural History: a Winter Retreat, Prof. John T. McKendrick, F.R.S., 8; a Winter Retreat for Snails, W. Hoskyns-Abrahall, 96; Moral Superiority among Birds, A. R. Horwood, 40; Linnean Society, 87, 148, 263, 359, 448, 478; a Crocodile's Nest, G. W. Grabham, 96; Last Hours with Nature, Eliza Brightwen, 129; the Adventures of Cock Robin and his Mate, R. Kearton, 129; Nature Studies by Night and Day, F. C. Snell, 129; the Nature-book, 129; the Story of the Sea and Seashore, W. Percival Westell, 129; the House in the Water, Charles D. G. Roberts, 129; Close to Nature's Heart, William M'Conachie, 129; Death of Dr. W. H. Edwards, 164, 224; Trees Shown to the Children, Janet Harvey Kelman and C. E. Smith, 192; Animals at Home, W. P. Westell, 192; Nature Study, J. R. Ainsworth Davis, 192; the Natural History Museum, Profs. J. C. Ewart, F.R.S., A. Sedgwick, F.R.S., Sydney J. Hickson, F.R.S., and Gilbert C. Bourne, 229; the Natural History Museum, 254; Forms, Markings, and Attitudes in Animals and Plant Life, Dr. Arthur Willey, F.R.S., 247; Seal-rocks at Westernport, Bass Strait, J. W. Barrett, 257; the "Sense of Direction" in Bees, Gaston Bonnier, 269; Do Animals take Advantage of Experience? Dr. T. Zell, 317; the Book of Nature-study, 344; Insect Stories, Vernon L. Kellogg, 344; Alpine and Bog Plants, Reginald Farrer, 344; Life-histories of Familiar Plants, John J. Ward, 344; Natural History in India, 370; Brown-bear Hunting in Alaska, G. Mixter, 378; Eliza Brightwen: the Life and Thoughts of a Naturalist, 426; the Life of Philibert Commerson, D.M., Naturalist du Roi: an Old-World Story of French Travel and Science in the Days of Linnæus, Captain S. Pasfield Oliver, 430; the Pollination of the Primrose, John J. Ward, 457; W. E. Hart, 457, 492; the Reviewer, 457; New South Wales Linnean Society, 479
Natural Monuments, the Care of, with Special Reference to Great Britain and Germany, Prof. H. Conwentz, 275
Nature, Design in, Dr. J. Bell Pettigrew, F.R.S., 151
Naturgeschichte des Menschen, Beiträge zur, Dr. Gustav Friedenthal, Prof. G. Elliot Smith, F.R.S., 211
Naturwissenschaftlich-pädagogischer Abhandlungen, Sammlung, Prof. J. A. Green, 304
Nautic-Astronomical and Universal Calculator, the, R. Nelting, 490
Naval Architecture: the Institution of Naval Architects, 172; Types of Warships Omitted in Recent Programmes of Naval Construction, Lord Brassey, 172; Sir Wm. White, 172; Elasticity of Ships as Deduced from Experiments on the Vibration of Dynamical Models, Prof. J. B. Henderson, 173; Applications of the Internal-combustion Engine to Marine Propulsion, H. C. Anstey, 173; F. R. S. Bircham, 173; Steamer Trials with Various Kinds of Screws, Lieut.-Colonel G. Rota, 173; Mechanical Method for Determining the Thrust of Propellers, J. H. Heck, 173; the Plant Necessary in Warship Construction, 227; the Wave-making Resistance of Ships, T. H. Havelock, 298
Navigation: Hydroplanes or Skimmers, Sir John I. Thornycroft, F.R.S., 107; a 40-Feet Gas-driven Launch, Maclaren Bros., 227; an Explanation of the Adjustment of Ships' Compasses, Commander L. W. P. Chetwynd, 276; New White Star Liner *Laurentic*, 320
Nebulæ, Spectra of, Prof. Wolf, 229; Dr. Eberhard, 229
Nebulæ, the Spectra of Various, Prof. Wolf, 19
Nelting (R.), the Nautic-Astronomical and Universal Calculator, 490
Nerve Fibres, Growth of, Ross Harrison, 325
Neumayer (Dr. G. von, For.Mem.R.S.), Death of, 375; Obituary Notice of, Hy. Harries, 402; Corr., 439
Neuroptera: die Termiten oder weissen Ameisen, K. Escherich, 245
New South Wales Linnean Society, 479
New York Zoological Society, Aquarium of the, 500
Newall (Prof.), Cosmical Matter in Space, 142
Newton (Prof. A., F.R.S.), Life and Letters of, A. F. R. Wollaston, 8
Nicholson (Prof. John T.), Lathe Design for High- and Low-speed Steels, 33; Laws of Heat and Transmission Deduced from Experiment, Paper at Junior Institution of Engineers, 144
Nicholson (Dr. J. W.), the Simple Equivalent of an Alternating Circuit of Parallel Wires, 247; Inductance and Resistance in Telephone and Other Circuits, 509
Nicol (J.), Rotation of the Electric Arc in a Radial Magnetic Field, 27
Nijland (Prof.), the Recent Magnitudes of Nova Persei, 19; Observations of Variable Stars, 142
Noctuidæ of the Lepidoptera of the British Islands, the Genitalia of the, F. M. Pierce, 246
Noel (Mr.), Parasitic Habit of Quelea, 295
Nordmann (Dr. Ch.), Dispersion of Light in Interstellar Space, 409
Norway, an Account of the Crustacea of, Prof. G. O. Sars, W. A. Cunnington, 184
Norwegian Aurora Polaris Expedition, the, 1902–3, Vol. i., on the Cause of Magnetic Storms and the Origin of Terrestrial Magnetism, Kr. Birkeland, 410
Nova Persei, the Recent Magnitudes of, Prof. Nijland, 19
Nuth (A. J.), Habits of Australian Bower-birds, 113
Nutrition: Human Foods and their Nutritive Value, H. Snyder, C. Simmonds, 366

Oberhummer (Prof. Dr. Eugen), Leonardo da Vinci and Geography, 351
Obermaier (Dr. Hugo), Stone Implements of the French Older Palæolithic Age, 139
Observatories: the Melbourne Observatory, Mr. Baracchi, 51; the Cape Observatory, 79; the United States Naval Observatory, 170; the Vatican Observatory, 200; Mount Wilson Solar Observatory Report, Prof. Hale, 260; Harvard College Observatory, Prof. Pickering, 321; the Royal Observatory, Greenwich, 446
Occultations of Planets, Dr. Downing, 288
Oddone (Dr. Emilio), Depth of the Epicentre of Recent Sicilian Earthquake, 168
Ogden (Prof. Henry N.), Sewer Construction, 5
Oil and Bromoil Processes, the, F. J. Mortimer and S. L. Coulthurst, 67
Oil Motors, G. Lieckfeld, 246
Oliver (Captain S. Pasfield), the Life of Philibert Commerson, D.M., Naturalist du Roi, an Old-World Story of French Travel and Science in the Days of Linnæus, 430
Ophthalmology: Death and Obituary Notice of Dr. Simeon Snell, 256
Optics: Relations of Marine Organisms to Light, Prof. B. Moore, 16; Variation in Intensity of Light at Different Altitudes, Dr. M. Samec, 17; Action of Light upon Milk to which Potassium Bichromate has been Added, A. Gascard, 60; Attempt to Detect Some Electro-optical Effects, Prof. H. A. Wilson, 118; Abhandlungen zur Physiologie der Gesichtsempfindungen aus dem physiologischen Institut zu Freiburg-i-B., 125; Cours de Physique, conforme aux Programmes des Certificats et de l'Agrégation de Physique, Optique, Étude des Instruments, Prof. H. Bouasse, 153; the Photo-electric Fatigue of Zinc, H. Stanley Allen, 178; Photographic Optics and Colour Photography, including the Camera, Kinematograph, Optical Lantern, and the Theory and Practice of Image

Formation, Dr. George Lindsay Johnson, 185; Polarisation by Lateral Diffusion, Georges Meslin, 299; Simple Method of Finding Indices of Refraction of Liquids under the Microscope, Dr. Enrico Clerici, 319; New Form of Optometer, Prof. W. F. Barrett, F.R.S., 348; a New Kind of Glow in Vacuum Tubes, Rev. H. V. Gill, 358; Methods of Determining the Amount of Light Irregularly Reflected from Rough Surfaces, Prof. W. F. Barrett, 388; New Polarimeter for the Measurement of the Indices of Refraction of Opaque Bodies, Prof. W. F. Barrett, 388; the Chromatic Circle according to Young's Hypothesis, A. Rosenstiehl, 389; the Nature of Flame Spectra, E. Bauer, 408; Colour-vision in Monkeys, J. B. Watson, 435; an Optical Phenomenon, 398; Charles E. Benham, 458

Orbit of ξ Boötis, Prof. Doberck, 380

Orbits, the Circularity of Planetary, Prof. T. J. J. See, 229

Orbits of Spectroscopic Binaries, R. H. Baker, 229; F. C. Jordan, 229

Ore Deposits of South Africa, the, J. P. Johnson, 395

Orientation: Earthwork of England, Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, Rev. John Griffith, 69

Origin of Vertebrates, the, Dr. Walter Holbrook Gaskell, F.R.S., 301

Origin of Vertebrates, Gaskell's, Dr. W. H. Gaskell, F.R.S., 428

"Original" Canals of the Martian Doubles, the, Prof. Lowell, 260

Origins of Satellites, Prof. See, 380

Ornithology: Life and Letters of Prof. A. Newton, F.R.S., A. F. R. Wollaston, 8; Some Bird Papers, 113; Malleefowl (*Lipoa ocellata*), A. H. E. Mattingley, 113; Habits of Australian Bower-birds, A. J. Nuth, 113; Use of Wind by Migrating Birds, F. Stubbs, 120; the Birds of Tierra del Fuego, Richard Crawshay, 155; Osmotic Pressures of the Blood and Eggs of Birds, W. R. G. Atkins, 179; an Ornithological Coincidence, Dr. Henry H. Giglioli, 188; Bird Notes, 295; Marked Storks and Swallows, Dr. Thienemann, 295; Parasitic Habit of Quelea, Mr. Noel, 295; Manner in which Young Flamingoes Feed, F. M. Chapman, 499

Orr (Prof. W. McF.), Proofs of Generalised Fourier Sum Theorems in Trigonometrical and in Bessel Functions, 88

Orthoptera, Biologia Centrali-Americana, Vol. i., Dr. Henri de Saussure, Dr. Leo Zehntner, and A. Pictet, Forficulidæ, Count de Bormans; Vol. ii., Acridiidæ, Prof. Lawrence Brunner, Tettiginæ, Albert P. Morse, and Phasmidæ, Robert Shelford, 241

Osteology: Unusual Condition of Nasal Bones in Sphenodon, H. W. Unthank, 69

Oswald (Dr. Felix), the Golden Fleece, 96

Otaria, General Results of the Meteorological Cruises of the, on the Atlantic in 1905, 1906, and 1907, L. Teisserenc de Bort and Prof. A. Lawrence Rotch, 219

Oxford University, the Reform of, 311

Pädagogik, Psychologie als Grundwissenschaft der, 95

Palæobotany: Plant-containing Nodules from Japan, Marie C. Stopes, 119; Fossil Flora of Tegelen-sur-Meuse, Clement Reid, F.R.S., and Eleanor M. Reid, 261; *Cycadeoidea etrusca* in Bologna, G. R. Wieland, 261; die Acanthicus-Schichten im Randgebirge der Wiener Bucht, Franz Toula, 262; the Flora of the Wealden Strata, Dr. D. H. Scott, F.R.S., 476; *Calamites* (*Calamitina*) *Schutzei*, Stur, A. R. Horwood, 478

Palæoichthyology: Devonian Fishes of Iowa, Dr. Charles R. Eastman, 318

Palæolithics: Stone Implements of the French Older Palæolithic Age, Dr. Hugo Obermaier, 139; Palæolithic Vessels of Egypt, or the Earliest Handiwork of Man, Robert de Rustafjaell, 245

Palæontology: Discovery of Skeleton of Mammoth on the Shore of Selsey Bill, 104; Another Fossil Tsetse-fly, Prof. T. D. A. Cockerell, 128; Cast of Skull and Mandible of Long-chinned Mastodont, *Tetrabelodon angustidens*, from Middle Miocene of Sansan, 196; Mammoth Skeleton, W. J. Lewis Abbott, 225; E. Heron-Allen, 225; Some Recent Palæontological Papers, 261; Invertebrate Fauna of Uitenhage Beds in Cape Colony, Dr. Kitchin, 262; les Mollusques fossiles du Tertiaire et du Crétacé supérieur de l'Argentine, H. von Ihering, 262; Fauna of the Hundsheim Cave in Lower Austria, Wilhelm Freudenberg, 263; Cyclololina, a New Genus of Foraminifera, E. Heron-Allen and A. Earland, 285; Fossils from Napeng Beds of Burma, Maud Healey, 287; Permian Footprints, G. Hickling, 328; Osteology and Affinities of the Jurassic American Iguanodont Reptiles of the Genus Camptosaurus, C. W. Gilmore, 378; der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg, Otto Schoetensack, Dr. William Wright, 398; South American Fossil Cetacea, Dr. F. W. True, 444; the Transformations of the Animal World, Charles Depéret, 452

Paper, the Manufacture of, R. W. Sindall, 422

Parallel Paths: a Study in Biology, Ethics, and Art, T. W. Rolleston, 35

Paris Academy of Sciences, 29, 59, 89, 148, 179, 209, 239, 269, 299, 329, 389, 449, 479, 509

Paris, the Astrographic Conference at, 440

Pariselle (H.), Improved Method of Preparing Allylcarbinol, 180

Parsons (Dr. H. Franklin), the Water Supply of Kent, with Records of Sinkings and Borings, 432

Parsons (S. Jones), Malleable Cast Iron, 454

Parthenogenesis und Apogamie im Pflanzenreiche, Dr. Hans Winkler, 61

Pascal (P.), a Chromyl Subchloride, 449

Patents and Designs Act, 1907, Germany and the, 401

Pathology: Mental Pathology in its Relation to Normal Psychology, a Course of Lectures delivered in the University of Leipzig, Dr. Gustav Störring, 216; the Bacteriology of Diphtheria, 243

Patterson (W. E.), School Algebra, 426

Payne-Gallwey (Sir Ralph), the Physics of Golf, 237

Peabody Museum of American Archæology and Ethnology, Memoirs of the, Harvard University, Explorations in the Department of Peten, Guatemala, and Adjacent Region, T. Maler, 160

Pearson (G. C.), Comparison Tests between New Féry Spiral Pyrometer and a Standardised Thermoelectric Féry Radiation Pyrometer, 379

Pearson (Prof. Karl, F.R.S.), the Scope of Eugenics, 203; (1) the Theory of Ancestral Contributions in Heredity, (2) the Ancestral Gametic Correlations of a Mendelian Population Mating at Random, 268; an Inquiry concerning Scientific and Medical Journals, 276

Pecten, W. J. Dakin, 273

Pélabon (H.), Fusibility of Mixtures of Gold and Tellurium, 329

Péralté (Lotus), Wall Paintings of Altamira Cavern, 501

Péringuey (L.), Rock-engravings in South Africa, 411

Perkin (Dr. F. Mollwo), Electro-analysis of Mercury Compounds with a Gold Kathode, 209

Perkins (J.), das Pflanzenreich, Styracaceæ, 424

Perman (Dr. E. P.), Vapour-density and Smell, 369

Perrine (Dr.), the Intra-Mercurial Planet Problem, 320; the Brightness of the Corona, 380; Solar Parallax from Observations of Eros, 468

Persei, Nova, the Recent Magnitudes of, Prof. Nijland, 19

α Persei, Radial Velocity of, F. Goos, 51

Perseid Meteors, the Ensuing Return of the, 468

Persian Treatise on Falconry, the Bāz-Nāma-yi-Nāsirī, a, 371

Petit (G. E.), New Wave Detector for Wireless Telegraphy and Telephony, 509

Petrology, Text-book of, Dr. F. H. Hatch, 337

Pettigrew (Dr. J. Bell, F.R.S.), Design in Nature, 151

Pfitzer (E.), das Pflanzenreich, Orchidaceæ-Cœlogyninæ, 424

Pflanzen, Einleitung in die experimentelle Morphologie der, Dr. K. Goebel, 61

Pflanzenreich, das, 424

Pflanzenreiche, Parthenogenesis und Apogamie im, Dr. Hans Winkler, 61

Pharmacognosy: Handbuch der Pharmakognosie, Prof. A. Tschirch, Prof. Henry G. Greenish, 3

Pharmacy Act, the Poisons of the, C. Simmonds, 191

Philippi (Prof. E.), die Grundproben der "Deustchen Tiefsee-Expedition," 486

Philology: the Two Living Secret Languages Current in Ireland, Shelta and Béarlagar na Saor, Prof. Meyer, 106
Philosophy: Death and Obituary Notice of Prof. H. Ebbinghaus, 14; the Grammar of Life, G. T. Wrench, 426; American Philosophy: the Early Schools, Prof. J. W. Riley, 489
Phin (John), the Evolution of the Atmosphere as a Proof of Design in Creation, 216
Phonautograph, the Gramophone as a, Prof. John G. McKendrick, F.R.S., 188
Photoelectricity: Part played by Impurities in the Photo-electric Effect with Liquids, Eugène Bloch, 89
Photography: Best Conditions for Photographic Enlargement of Small Solid Objects, A. Mallock, 29; the Oil and Bromoil Processes, F. J. Mortimer and S. L. Coulthurst, 67; the "Bromoil" Process, F. J. Mortimer, 324; Photographs of Morehouse's Comet, 1908c, Rev. Joel Metcalf, 108; Photographs of the Earthshine on the Moon, M. Quénisset, 141; Photographic Optics and Colour Photography, including the Camera, Kinematograph, Optical Lantern, and the Theory and Practice of Image Formation, Dr. George Lindsay Johnson, 185; the "Omnicolore" Plate, 199; Photographic Determination of the Colours of the Stars, Oesten Bergstrand, 299; Cloud Photographs from a Balloon, Dr. William J. S. Lockyer, 310; Photographic Registration of Brownian Trajectories in Gases, M. de Broglie, 329; a Standard Scale of Photographic Magnitudes, Prof. Pickering, 380; Electric Splashes on Photographic Plates, A. W. Porter, 348; Method of Testing Photographic Shutters, A. Campbell and T. Smith, 419; New Method of Illumination for Photographic Work, the "Petrolite" Photographic Lamp, A. J. Garrad, 439; National Antarctic Expedition, 1901–4, Album of Photographs and Sketches, 460; the Photography of Coloured Objects, Dr. C. E. Kenneth Mees, 489; the Problem of Kinematographic Vision without Vibrations, C. de Proszynski, 480; the Photoheliometer, Prof. Poor, 503; Errors of Position of Images Photographed through Glass, Dr. Schlesinger, 503
Photoheliometer, the, Prof. Poor, 503
Photometric Observations at Catania, A. Bemporad, 288
Photometric Units, Dr. R. T. Glazebrook, F.R.S., 374
Physics: Leçons de Physique générale, J. Chappuis and A. Berget, 6; Explication méchanique des Propriétés de la Matière, Cohésion, Affinité, Gravitation, &c., A. Despaux, 6; Thermal Effects of a Musical Arc, M. La Rosa, 29, 89; Number of Molecules in Unit Volume of a Gas, P. Ghose, 39; Methods of High Vacua, Messrs. Scheel and Heuse, 50; Supposed Effect of Crystallisation for Modifying the Properties of the Solution of a Body Resulting from the Direct Union of Two Solutions, D. Gernez, 59; Variation of the Viscosity of a Gas with Temperature, Willard J. Fisher, 77; Laboratory Machine for Applying Bending and Twisting Moments Simultaneously, Prof. E. G. Coker, 87; Physical Society, 87, 147, 239, 327, 419, 509; Death of Prof. J. W. Moore, 103; High Hydrostatic Pressures, P. W. Bridgman, 107; the National Physical Laboratory during 1908, 109; Experiments on the Ignition Point of Gases by the Method of Adiabatic Compression Suggested by Prof. Nernst, Prof. H. B. Dixon, 119; General Physics, Dr. Henry Crew, 122; Early References to Fluorescence and Light Transmitted by Thin Gold Films, John H. Shaxby, 128; Fluorescence of *Lignum Nephriticum*, Charles E. Benham, 159; Dr. O. Stapf, F.R.S., 218; John H. Shaxby, 248; Laws of Heat and Transmission Deduced from Experiment, Prof. J. T. Nicholson at Junior Institution of Engineers, 144; Depression of Filament of Maximum Velocity in a Stream flowing through an Open Channel, A. H. Gibson, 147; the Flow of Rivers, Bouquet de la Grye, 148; Measurements of the Coefficient of Resistance of Air, A. Etévé, 149; Cours de Physique conforme aux Programmes des Certificats et de l'Agrégation de Physique, Optique, Étude des Instruments, Prof. H. Bouasse, 153; Measurements of the Compressibilities of Pure Water and of Sea-water, Dr. V. W. Ekman, 168; the Rate of Fall of Fungus Spores in Air, Prof. A. H. Reginald Buller, 186; Moving Force of Terrestrial and Celestial Bodies in Relation to the Attraction of Gravitation, Dr. H. Wilde, 209; Death of Prof. F. L. Tufts, 224; Addition to the Atwood Machine, Dr. O. Krüger, 227; the Physics of Golf, Sir Ralph Payne-Gallwey, 237; Specific Heat of Air and Carbon Dioxide at Atmospheric Pressure, by the Continuous Electrical Method, at 20° C. and at 100° C., W. F. G. Swann, 238; the Wave-making Resistance of Ships, T. H. Havelock, 298; New Automatic Mercury Pump, P. Klein, 329; Physikalische Musiklehre, Dr. Hermann Starke, 338; Electrons and the Absorption of Light, R. A. Houston, 338; Photographs showing the Generation and Nature of "Explosion Waves" in Gases, Prof. H. B. Dixon, F.R.S., 348; a New Kind of Glow in Vacuum Tubes, Rev. H. V. Gill, 358; the Elements of Physical Chemistry, Prof. J. Livingston R. Morgan, 363; Outlines of Physical Chemistry, Dr. George Senter, 363; Vapour-density and Smell, Dr. E. P. Perman, 369; Photometric Units, Dr. R. T. Glazebrook, F.R.S., 374; Fractionation of Crude Petroleum by Capillary Diffusion, J. E. Gilpin and M. P. Cram, 409; Festschrift der Physikalisch-medizinischen Societät zu Erlangen zur Feier ihres 100 jährigen Bestehens am 27 Juni, 1908, 411; Sitzungsberichte der Physikalisch-medizinischen Societät in Erlangen, 411; Practical Physics, L. M. Jones, 425; Handbuch für physikalische Schülerübungen, Prof. Hermann Hahn, 425; Relative Efficiencies of Methods for the Production of High Vacua, Drs. Scheel and Heuse, 438; Simple Apparatus to Measure the Diffusion of Gases, Ll. T. Jones, 438; Physics of the Æther, P. R. Heyl, 443; Effect of Temperature on the Absorption of Certain Solutions, Prof. H. C. Jones, 444; Internal Pressure in Gases, A. Leduc, 449; the Phenomenon of Intermittence of the *Gouffre de Poudak*, E. A. Martel, 449; Beschrijving en Onderzoek van der gyroscopischen Horizon Fleuriais (Model Ponthus et Therrode), L. Roosenburg, 455; the Standardisation of Condensers, M. Devaux-Charbonnel, 479; Catalytic Action Produced by Moisture, J. Meynier, 479; Unités Électriques, le Comte de Baillehache, Dr. J. A. Harker, 488; on the Relation of "Recoil" Phenomena to the Final Radio-active Product of Radium, Prof. J. C. McLennan, 490; Molecular Effusion and Transpiration, Martin Knudsen, 491; First Report of the British Association Committee appointed for the Investigation of Gaseous Explosions, with Special Reference to Temperature, Prof. E. G. Coker, 505
Physiology: the Production of Prolonged Apnœa in Man, W. G. Royal-Dawson, 8; Dr. H. M. Vernon, 30; the Nerves of the Atrio-ventricular Bundle, J. Gordon Wilson, 27; Determination of a Coefficient by which the Rate of Diffusion of Stain and other substances into Living Cells can be Measured, and by which Bacteria and other Cells may be Differentiated, H. C. Ross, 27; Cholesterol in the Animal Organism, Part iii., C. Dorée and J. A. Gardner, 28, Part iv., G. W. Ellis and J. A. Gardner, 28; the Origin and Destiny of Cholesterol in the Animal Organism, Mary T. Fraser and J. A. Gardner, 327; Are the Senses ever Vicarious? Prof. John G. McKendrick, F.R.S., 38; Effect of Heat upon the Electrical State of Living Tissues, Dr. A. D. Waller, 58; Hæm-agglutinins, Hæm-opsonins, and Hæm-lysins in the Blood from Diseases in Man, L. S. Dudgeon, 58; Abhandlungen zur Physiologie der Gesichtsempfindungen aus dem physiologischen Institut zu Freiburg-i-B., 125; Physiological and Medical Observations among the Indians of South-western United States and Northern Mexico, Aleš Hrdlička, 126; Death of Dr. Arthur Gamgee, F.R.S., 136; Obituary Notice of, 194; Penetration of Pulverised Liquids into the Respiratory Tracts, M. Cany, 150; Beiträge zur Naturgeschichte des Menschen, Dr. Gustav Friedenthal, Prof. G. Elliot Smith, F.R.S., 211; Hypotensive Function of Choline in the Organism, Jean Gautrelet, 240; Death of Dr. Gerald F. Yeo, F.R.S., 283; Obituary Notice of, 314; Reciprocal Innervation of Antagonistic Muscles, Note xiv., Double Reciprocal Innervation, Prof. C. S. Sherrington, 326; Histological Changes in the Liver and Kidney after Chloroform Administered by Different Channels, Dr. G. Herbert Clark, 328; Microscopic Section of the Aorta of King Menephtah, S. G. Shattock, 349; the Body at Work, Dr. Alex. Hill, 366; Death of Prof. Wilh. Engelmann, 375; the Urine in Diseases of the Pancreas, P. J. Cammidge, 386; Method of Estimating the Total Volume of Blood contained in the Living Body, Dr. J. O. W. Barratt and Dr. W. Yorke, 387; the Human Species, considered from the

Standpoints of Comparative Anatomy, Physiology, Pathology, and Bacteriology, Ludwig Hopf, 424; the Catalase of the Blood, C. Gessard, 449; the Sense of Proximity, Charles H. Melland, 456; Effects of Chocolate and Coffee on Uric Acid and the Purins, Pierre Fauvel, 480; Problem of Man's Right-handedness, Prof. E. Gaupp, 500; the New Institute of Physiology at University College, London, 503; Variations of Dehydrations of the Organism with Altitude, H. Guillemard and R. Moog, 510
Pickering (Prof.), Harvard College Observatory, 321; a Standard Scale of Photographic Magnitudes, 380
Pickering (W. H.), Annals of the Astronomical Observatory of Harvard College, a Search for a Planet beyond Neptune, 463
Pictet (Amé), Complete Synthesis of Laudanosine, 210
Pictet (A.), Biologia Centrali-Americana, Orthoptera, Vol. i., 241
Piedallu (André), a Mould in Tanning with Oil, 30
Pierce (F. M.), the Genitalia of the Noctuidæ of the Lepidoptera of the British Islands, 246
Pirie (Dr. J. H. Harvie), Report on the Scientific Results of the Voyage of S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, 161
Pisciculture: Plaice-output at Port Erin, 284; Costiasis and its Treatment in Young Trout, Louis Léger, 389
Planets: Diameter and Position of Mercury, Prof. Stroobant, 200; Mercury as an Evening Star, 320; Mars as the Abode of Life, Percival Lowell, 212; the "Original" Canals of the Martian Doubles, Prof. Lowell, 260; Development of Martian Canals, Prof. Lowell, 288; Mars, Prof. Lowell, 353; the Circularity of Planetary Orbits, Prof. T. J. J. See, 229; les Planètes et leur Origines, Ch. André, 274; Occultation of Planets, Dr. Downing, 288; the Intra-Mercurial Planet Problem, Prof. Campbell, 320; Dr. Perrine, 320; Jupiter, Prof. Lowell, 352; Mr. Lampland, 353; a Remarkable Transit of Jupiter's Third Satellite, Mr. Innes, 409; the Rings of Saturn, Prof. Levi-Civito, 439; Annals of the Astronomical Observatory of Harvard College, a Search for a Planet beyond Neptune, W. H. Pickering, 463
Plants, Life-histories of Familiar, John J. Ward, 344
Plants and their Ways, E. Evans, 452
Plaskett (Mr.), Camera Objectives for Spectrographs, 440
Platen (Dr. Paul), Untersuchungen fossiler Hölzer aus dem westen Vereinigten Staaten von Nordamerika, 185
Pohl (Dr. Robert), the Defects of English Technical Education and the Remedy; Paper read at the Association of Teachers in Technical Institutions in Huddersfield, 205
Poisons of the Pharmacy Act, the, C. Simmonds, 101
Poizat (L.), Oxidation of Aromatic Nitro- and Nitroso-derivatives by Ammonium Persulphate, 300
Pollination of the Primrose, the, John J. Ward, 457; W. E. Hart, 457, 492; the Reviewer, 457
Pollock (Sir Frederick), the British Science Guild, 52
Poor Law Commission Report, the, 12
Poor (Prof.), the Perturbations of Brooks's Comet (1889 V) by Jupiter in 1886, 410; the Photoheliometer, 503
Popularising of Scientific Knowledge, 257
Porter (A. W.), Electric Splashes on Photographic Plates, 348
Posejpal (V.), Electromotive Forces of Magnetisation, 149
Potatoes, the Dry-rot of, Sibyl Longman, 148
Potts (F. A.), Changes in the Common Shore Crab caused by Sacculina, 88
Poultry, Influence of Breed on Egg-production in, E. and W. Brown, 138
Pressland (A. J.), the Supply of Secondary Education in England and Elsewhere, 473
Pressure in the Sun's Atmosphere, MM. Fabry and Buisson, 229
Prideaux (Dr. E. B. R.), Relation between Composition and Conductivity in Solutions of *meta*- and *ortho*-Phosphoric Acids, 209
Priest (Walter B.), the Promotion of Scientific Research, 68
Priestley and Coulomb's Law, C. J. Woodward, 8
Primrose, the Pollination of the, John J. Ward, 457; W. E. Hart, 457, 492; the Reviewer, 457
Prior (Dr. G. T.), Identity of Guarinite and Hiortdahlite, 178
Producer Gas for Engines, J. Emerson Dowson, 200, 232
Prominence, a Remarkable, Father Chevalier, 108
Proszynski (C. de), the Problem of Kinematographic Vision without Vibrations, 480
Proteins, the General Characters of the, Dr. S. B. Schryver, 307
Protistenkunde, Problem der, i., die Trypanosomen ihre Bedeutung für Zoologie, Medizin und Kolonialwirtschaft, Prof. F. Döflein, 489
Protozoa: a Treatise on Zoology, Part i., Introduction and Protozoa, 152
Prout (Louis B.), Cross-breeding of Two Races of the Moth *Icidalia virgularia*, 58
Proximity, the Sense of, Charles H. Melland, 456
Przibram (Dr. Hans), Experimental Zoology, 2
Psychology: Psychologie als Grundwissenschaft der Pädagogik, 95; Mental Pathology in its Relation to Normal Psychology, a Course of Lectures delivered in the University of Leipzig, Dr. Gustav Störring, 216; an Introduction to Social Psychology, William McDougall, William Brown, 245; Lectures on the Elementary Psychology of Feeling and Attention, Prof. E. B. Titchener, William Brown, 245; die Hypnose und die Suggestion, ihre Wesen, ihre Wirkungsweise und ihre Bedeutung und Stellung unter den Heilmitteln, Dr. W. Hilger, 273; Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, Wilhelm Wundt, Rev. A. E. Crawley, 334
Purdy (C. T.), Problems Connected with the Construction of *New York Times* Building, 259
Purvis (J. E.), Influence of Dilution on the Colour and the Absorption Spectra of Various Permanganates, 420

Quénisset (M.), Photographs of the Earthshine on the Moon, 141

Radiography: the γ Rays of Uranium, Frederick Soddy and Alexander S. Russell, 7; the Radio-active Deposits of Actinium, S. Russ, 8; Coefficient of Diffusion of the Actinium Emanation, G. Bruhat, 89; Radio-thorium, Frederick Soddy, 12; the Absorption of X-rays, Dr. C. G. Barkla and C. A. Sadler, 37; the Rays of Uranium X, Frederick Soddy, 37; Radium Institutes, 45; Liquid Radium Emanation, Sir William Ramsay, K.C.B., F.R.S., 347; the Interpretation of Radium, Frederick Soddy, 368; the Radium Emanation, A. Debierne, 389; Influence of Radium on the Velocity of Crystallisation, Louis Frischauer, 389; the Condensation of the Radium Emanation, A. Laborde, 509; Chemical Action of the Penetrating Rays of Radium on Water, Miroslaw Kernbaum, 149; on the α Rays from Radium B, Dr. Howard L. Bronson, 159; Influence of Radium Rays on Plants, Prof. C. S. Gager, 198; Expulsion of Radio-active Matter in the Radium Transformations, Sidney Russ and W. Makower, 238; Passage of Röntgen Rays through Gases and Vapours, J. A. Crowther, 57; Ionisation by Röntgen Rays, Dr. Charles G. Barkla, 187; Statistical Theory of the Form of the Curve of Oscillation for the Radiation Emitted by a Black Body, Prof. H. A. Wilson, 57; Magnetic Rays, 80; Velocity of the Kathode Rays Ejected by Substances Exposed to the γ Rays of Radium, R. D. Kleeman, 86; Effect of Radiations on the Brush Discharge, A. E. Garrett, 147; Leakage of Helium from Radio-active Minerals, Hon. R. J. Strutt, F.R.S., 147; Liberation of Helium from Radio-active Minerals by Grinding, J. A. Gray, 238; Magneto-kathode Rays, M. Gouy, 149; Contribution to the Study of Radiation, G. Millochau, 149; Radio-activity of the Thermal Springs of Bagnères-de-Luchon, Charles Moureu and Adolphe Lepape, 180; Determination of the Constant of Stefan's Law, C. Féry, 209; Radiation and Temperature of the Flame of a Bunsen Burner, Edmond Bauer, 209; Radiation of Potassium Salts, E. Henriot, 209; Apparatus for Radio-active Measurements by the Electroscope Method, C. Cheneveau and A. Laborde, 228; Radio-activity in Relation to Morozoff's Theory of the Constitution of Atoms, Prof. B. de Szyszkowski, 276; Properties of Doubly-charged Ions, Drs. J. Franck and W. Westphal, 287; Investigation of the Radiation Constants of Metals, Dr. W. W.

Coblentz, 288; Effect of Temperature on Ionisation, J. A. Crowther, 297; Ionisation of Various Gases by Secondary γ Rays, R. D. Kleeman, 298; Ionisation with γ Rays, L. Vegard, 328; Nature of the Ionisation Produced in a Gas by γ Rays, R. D. Kleeman, 328; a Direct Estimate of the Minimum Age of Thorianite, Hon. R. J. Strutt, F.R.S., 308; a Want of Symmetry Shown by Secondary X-rays, Prof. W. H. Bragg and J. L. Glasson, 327; Transformations of X-rays, C. A. Sadler, 327; Phenomena of X-ray Transmission, C. G. Barkla, 419; Fatigue Effects of the Kathode in a Discharge Tube, R. Whiddington, 420; Origin, History, and Development of the Röntgen-ray Tube, J. H. Gardiner, 438; Evolution of Heat by Radio-active Bodies, William Duane, 449; Radium and Uranium Contained in Radio-active Minerals, Ellen Gleditsch, 449; Small Part taken by Radiation in Heat Transmission through a Metal, Dr. M. Reinganum, 467; a Simple Radioscope and a Radiometer for Showing and Measuring Radio-activity, Dr. J. Aitken, 478; on the Relation of "Recoil" Phenomena to the Final Radio-active Product of Radium, Prof. J. C. McLennan, 490; the Treatment of Nævus by Electrolysis and Radium Combined, Fouveau de Courmelles, 480

Radio-thorium, Frederick Soddy, 12

Radium: Radium Institutes, 45; on the α Rays from Radium B, Dr. Howard L. Bronson, 159; Production of Radium from Uranium, Frederick Soddy, 308; Pitchblende from Trenwith Mine, Francis Fox, 349; the Interpretation of Radium, Frederick Soddy, 368; *see also* Radiography

Railways, the Electrification of, John A. F. Aspinall at Institution of Mechanical Engineers, 260

Ramaley (Dr. F.), Vegetation in and around the Red Rock Lake, Colorado, 407

Rambaud (M.), Comet Tempel$_2$-Swift, 1908*d*, 79

Ramsay (Sir William, K.C.B., F.R.S.), the British Science Guild, 52; the Imperial Side of the Fuel Question, 278; Liquid Radium Emanation, 347

Ranke (Prof. Heinrich von), Death and Obituary Notice of, 350

Rarer Elements, Introduction to the, Dr. Phillip E. Browning, 182

Rastall (R. H.), the Boulders of the Cambridge Drift, 350

Rawson (Col. H. E.), the Anticyclonic Belt of the Northern Hemisphere, 387

Reade (T. Mellard), Death and Obituary Notice of, 404

Reale Istituto Lombardo Prize Awards, 137

Recoura (A.), Cuprous Sulphate, 299

Reform at Cambridge, 345

Reform at Oxford University, 311

Reid (Clement, F.R.S., and Eleanor M.), Fossil Flora of Tegelen-sur-Meuse, 261

Reighard (Prof.), Significance of the Conspicuousness of the Coral-reef Fishes of the Tortugas, 382

Reinganum (Dr. M.), Moving-coil Galvanometer, Methods of Making the Instruments Suitable for Measuring Small Currents, 18; Small Part taken by Radiation in Heat Transmission through a Metal, 467

Reinhardt (Dr. Ludwig), Human Skeleton Discovered in Cavern of Le Moustier, Dordogne, 466

Relevance of Mathematics, the, Philip E. B. Jourdain, 382

Rengade (E.), Suboxide of Cæsium, 330

Research: Scientific Research and the Carnegie Trust, 20; the Promotion of Scientific Research, Walter B. Priest, 68; Prize Subjects for Scientific Research, 80; the Encouragement of Research, Dr. E. H. Griffiths, F.R.S., 127; Research and the Colleges, W. P. Dreaper, 128

Respiration, Schäfer Method of Artificial, in Case of the Apparently Drowned, 138

Reviews and Our Bookshelf.

Science in Modern Life, 1

Experimental Zoology, Dr. Hans Przibram, Dr. Francis H. A. Marshall, 2

Handbuch der Pharmakognosie, Prof. A. Tschirch, Prof. Henry G. Greenish, 3

The Structure of the Wool Fibre and its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, Prof. Walter M. Gardner, 4

Principles of Sewage Treatment, Prof. Dunbar, Edward Ardern, 5

Sewer Construction, Prof. Henry N. Ogden, Edward Ardern, 5

Modern Methods of Sewage Disposal, W. H. Trentham and J. Saunders, Edward Ardern, 5

Explication Méchanique des Propriétés de la Matière, Cohésion, Affinité, Gravitation, &c., A. Despaux, 6

Leçons de Physique générale, J. Chappuis and A. Berget, 6

Biochemie, ein Lehrbuch für Mediziner, Zoologen und Botaniker, Dr. F. Röhmann, 6

Geometry, Theoretical and Practical, W. P. Workman and A. G. Cracknell, 7

Geography, Structural, Physical, and Comparative, Prof. J. W. Gregory, F.R.S., 31

A Text-book of Geography, G. Cecil Fry, 31

Handbuch der anorganischen Chemie, 32

Lathe Design for High- and Low-speed Steels, Prof. John T. Nicolson and Dempster Smith, 33

Mechanics of Engineering, Prof. Irving P. Church, 33

Motor-car Mechanism and Management, W. Poynter-Adams, 33

First Course in Biology, L. H. Bailey and W. M. Coleman, 34

Schlich's Manual of Forestry, W. R. Fisher, 35

Parallel Paths: a Study in Biology, Ethics and Art, T. W. Rolleston, 35

A Course of Pure Mathematics, G. H. Hardy, 36

Clay Modelling in Manual Training from Plan, Elevation, and Section, F. W. Farrington, 36

Clay Modelling in Manual Training, Scholars' Handbook, 36

Handbook to the Technical and Art Schools and Colleges of the United Kingdom, 36

La Côte d'Azur Russe (Riviera du Caucase), E. A. Martel, Prof. Grenville A. J. Cole, 40

Einleitung in die Experimentelle Morphologie der Pflanzen, Dr. K. Goebel, 61

Parthenogenesis und Apogamie im Pflanzenreiche, Dr. Hans Winkler, 61

The Vivisection Controversy, Dr. Albert Leffingwell, 63

The Theory and Design of Structures, Ewart S. Andrews, 64

The Strength of Materials, Prof. Arthur Morley, 64

An Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., Maurice Solomon, 65

La Télégraphie sans Fil et les Applications pratiques des Ondes Électriques, Albert Turpain, Maurice Solomon, 65

Jahrbuch der drahtlosen Telegraphie und Telephonie, Maurice Solomon, 65

Handbuch zur Geschichte der Naturwissenschaften und der Technik, 66

British Butterflies and Other Insects, 67

The Oil and Bromoil Processes, F. J. Mortimer and S. L. Coulthurst, 67

Earthwork of England: Prehistoric, Roman, Saxon, Danish, Norman, and Mediæval, A. Hadrian Allcroft, Rev. John Griffith, 69

Manual of Tides, Rollin A. Harris, 91

The Face of the Earth, E. Suess, 91

On Infantilism from Chronic Intestinal Infection, Characterised by the Overgrowth and Persistence of Flora of the Nursling Period, Prof. C. A. Herter, 92

The Heredity of Acquired Characters in Plants, Rev. Prof. George Henslow, 93

Elementary Agricultural Chemistry, Herbert Ingle, Dr. E. J. Russell, 93

Timber, J. R. Baterden, 94

Biology and its Makers, with Portraits and Other Illustrations, Prof. W. A. Locy, 95

Psychologie als Grundwissenschaft der Pädagogik, 95

A Brief Course in Elementary Dynamics for Students of Engineering, Ervin S. Ferry, 95

Report of the Departmental Committee on Humidity and Ventilation in Cotton-weaving Sheds, 101

Alaska, ein Beitrag zur Geschichte nordischer Kolonisation, Prof. H. Erdmann, 121

General Physics, Dr. Henry Crew, 122

A Treatise on Spherical Astronomy, Sir Robert Ball, F.R.S., 123

The Cell as the Unit of Life, and Other Lectures Delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, Allan Macfadyen, 123
The Internal Combustion Engine, H. E. Wimperis, Prof. E. G. Coker, 124
Internal Combustion Engines, their Theory, Construction, and Operation, R. C. Carpenter and H. Diederichs, Prof. E. G. Coker, 124
Abhandlungen zur Physiologie der Gesichtsempfindungen aus dem physiologischen Institut zu Freiburg-i-B., 125
Fresh-water Algæ from Burma, including a few from Bengal and Madras, W. West and G. S. West, 125
Trees: a Handbook of Forest Botany for the Woodlands and the Laboratory, Prof. H. Marshall Ward, 126
The Story of Iron and Steel, J. Russell Smith, 126
Physiological and Medical Observations among the Indians of South-western United States and Northern Mexico, Aleš Hrdlička, 126
Ernst Haeckel, Versuch einer Chronik seines Lebens und Wirkens, Prof. Walther May, 126
Ventilation for Dwellings, Rural Schools, and Stables, F. H. King, 127
Last Hours with Nature, Eliza Brightwen, 129
The Adventures of Cock Robin and his Mate, R. Kearton, 129
Nature Studies by Night and Day, F. C. Snell, 129
The Nature-Book, 129
The Story of the Sea and Seashore, W. Percival Westell, 129
The House in the Water; a Book of Animal Life, Charles G. D. Roberts, 129
Close to Nature's Heart, William M'Conachie, 129
Transactions of the International Union for Cooperation in Solar Research, 134
Design in Nature, Dr. J. Bell Pettigrew, F.R.S., 151
A Treatise on Zoology, 152
Cours de Physique conforme aux Programmes des Certificats et de l'Agrégation de Physique, Prof. H. Bouasse, 153
Chemische Krystallographie, Prof. P. Groth, 154
The Birds of Tierra del Fuego, Richard Crawshay, 155
Handbook for Egypt and the Sudan, 155
Index Kewensis Plantarum Phanerogamarum, 156
Die Metamorphose der Insekten, Dr. P. Deegener, 156
Memoirs of the Peabody Museum of American Archæology and Ethnology, Harvard University, 160
Report on the Scientific Results of the Voyage of S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, David W. Wilton, Dr. J. Harvie Pirie, and R. N. Rudmose Brown, Vol. v., Invertebrates, 161
Sketch of the Mineral Resources of India, Sir T. H. Holland, 163
West Indian Bulletin, 164
The Journal of the South-Eastern Agricultural College Wye, Kent, 170
Astronomy of To-day, Dr. Cecil G. Dolmage, William E. Rolston, 181
Scientific Ideas of To-day, Charles R. Gibson, William E. Rolston, 181
Introduction to the Rarer Elements, Dr. Phillip E. Browning, 182
Aus der Werkstatt grosser Forscher. Allgemeinverständliche erläuterte Abschnitte aus den Werken hervorragender Naturforscher aller Volker und Zeiten, Dr. Friedrich Danneman, 182
The Essentials of Sanitary Science, Gilbert E. Brooke, 183
An Account of the Crustacea of Norway, Prof. G. O. Sars, W. A. Cunnington, 184
Synopsis of the British Basidiomycetes: a Descriptive Catalogue of the Drawings and Specimens in the Department of Botany, British Museum, Worthington G. Smith, 184
The Planning of Fever Hospitals and Disinfecting and Cleansing Stations, Albert C. Freeman, 185
Photographic Optics and Colour Photography, including the Camera, Kinematograph, Optical Lantern, and the Theory and Practice of Image Formation, Dr. George Lindsay Johnson, 185
Untersuchungen fossiler Hölzer aus dem westen Vereinigten Staaten von Nordamerika, Dr. Paul Platen, 185
Le precipitazioni atmosferiche in Italia dal 1880 al 1905, 192
Trees shown to the Children, Janet Harvey Kelman, 192
Animals at Home, W. P. Westell, 192
Nature Study, J. R. Ainsworth Davis, 192
Beiträge zur Naturgeschichte des Menschen, Dr. Hans Friedenthal, Prof. G. Elliot Smith, F.R.S., 211
Mars as the Abode of Life, Percival Lowell, 212
The British Empire (and Japan), its Features, Resources, Commerce, Industries, and Scenery, together with the Physical and Economic Conditions of the World, W. Bisiker, 213
Électricité Industrielle, C. Lebois, Prof. Gisbert Kapp, 213
Lehrbuch der Zoologie für Studierende, Dr. J. E. V. Boas, 214
An Organic Chemistry for Schools and Technical Institutes, A. E. Dunstan, 215
An Intermediate Course of Laboratory Work in Chemistry, E. K. Hanson and J. W. Dodgson, 215
Laboratory Notes on Industrial Water Analysis, Ellen H. Richards, 215
Mental Pathology in its Relation to Normal Psychology, Dr. Gustav Störring, 216
The Evolution of the Atmosphere as a Proof of Design in Creation, John Phin, W. E. Rolston, 216
Essays and Addresses, J. H. Bridges, 217
Aërodonetics, F. W. Lanchester, Prof. G. H. Bryan, F.R.S., 221
Artificial and Natural Flight, Sir Hiram S. Maxim, Prof. G. H. Bryan, F.R.S., 221
Biologia Centrali-Americana, Insecta, Orthoptera, Vol. i., Dr. Henri de Saussure, Dr. Leo Zehntner and A. Pictet; the Forficulidæ, Count de Bormans (1893–1899), Vol. ii., the Acridiidæ, Prof. Lawrence Bruner [the Tettiginæ, Albert P. Morse], and the Phasmidæ, Robert Shelford (1900–1909), 241
Practical Coal Mining, Prof. Henry Louis, 242
The Bacteriology of Diphtheria, 243
Alloys and their Industrial Applications, E. F. Law, 243
Astronomische Ortsbestimmung im Ballon, Prof. Adolf Marcuse, Dr. W. J. S. Lockyer, 244
An Introduction to Social Psychology, William McDougall, William Brown, 245
Lectures on the Elementary Psychology of Feeling and Attention, Prof. E. B. Titchener, William Brown, 245
Die Termiten oder weissen Ameisen, K. Escherich, 245
Oil Motors, G. Lieckfeld, 246
Bulletin of Miscellaneous Information, Royal Botanic Gardens, Kew, 246
The Genitalia of the Group Noctuidæ of the Lepidoptera of the British Islands, an Account of the Morphology of the Male Clasping Organs, F. M. Pierce, 246
Palæolithic Vessels of Egypt, or the Earliest Handiwork of Man, Robert de Rustafjaell, 246
The Nandi: their Language and Folk-lore, A. C. Hollis, 240
The Development of the Chick, F. R. Lillie, 271
The Manufacture of Explosives. Twenty Years' Progress, Oscar Guttmann, 272
Rapid Methods for the Chemical Analysis of Special Steels, Steel-making Alloys, and Graphite, C. M. Johnson, 272
Die Hypnose und die Suggestion, ihre Wesen, ihre Wirkungsweise und ihre Bedeutung und Stellung unter den Heilmitteln, Dr. W. Hilger, 273
Pecten, W. J. Dakin, 273
The Shores of the Adriatic, the Austrian Side, F. Hamilton Jackson, 274
Les Planètes et leur Origine, Ch. André, 274
The Care of Natural Monuments, with Special Reference to Great Britain and Germany, Prof. H. Conwentz, 275
The Mineral Kingdom, Prof. R. Brauns, 275
Man in the Light of Evolution, Dr. J. M. Tyler, 275
An Explanation of the Adjustment of Ships' Compasses, Commander L. W. P. Chetwynd, R.N., 276
The New Flora of the Volcanic Island of Krakatau, Prof. A. Ernst, 279
Camp-fires on Desert and Lava, W. T. Hornaday, 279
Ruwenzori: an Account of the Expedition of H.R.H Prince Luigi Amedeo of Savoy, Duke of the Abruzzi, F. de Filippi, Prof. J. W. Gregory, F.R.S., 281
A. E. Humphries: Journal of the Royal Society of Arts, No. 2934; A. Howard and G. L. C. Howard: Bulletin 14,

Agricultural Research Institute, Pusa; A. E. V. Richardson: Journal of Agriculture of South Australia, Vol. xii., No. 6; K. J. J. Mackenzie: Journal of the Board of Agriculture, Vol. xv., No. 10, Dr. E. J. Russell, 282
Scientific Transactions of the Royal Dublin Society, Vol. ix. (Series ii.), 289
Department of Commerce and Labour, Coast and Geodetic Survey, United States Magnetic Tables and Magnetic Charts for 1905, L. A. Bauer, Dr. C. Chree, F.R.S., 293
Magnetic Survey of the Dutch East Indies, 1903–7, Dr. W. van Bemmelen, Dr. C. Chree, F.R.S., 293
Survey of India, Extract from Narrative Reports, 1906–7, Dr. C. Chree, F.R.S., 293
The Origin of Vertebrates, Dr. Walter Holbrook Gaskell, F.R.S., 301
Botany of the Færöes, 303
Sammlung Naturwissenschaftlich-pädagogischer Abhandlungen, Prof. J. A. Green, 304
Cambridge County Geographies, G. F. Bosworth, 305
Practical Solid Geometry, Rev. P. W. Unwin, 305
Cassell's Elementary Geometry, W. A. Knight, 305
The Story of Gold, E. S. Meade, 306
Artificial Waterways and Commercial Development (with a History of the Erie Canal), Dr. A. Barton Hepburn, 307
Hydrographical Surveying, Rear-Admiral Sir William J. L. Wharton, K.C.B., 307
Œuvres complètes de Christian Huyghens publiées par la Société hollandaise des Sciences, 307
The General Characters of the Proteins, Dr. S. B. Schryver, 307
Mitteilungen der deutschen dendrologischen Gesellschaft, 325
Leçons sur le Carbone, la Combustion, les Lois chimiques, H. le Chatelier, Prof. Arthur Smithells, F.R.S., 331
Die Blütenpflanzen Afrikas, Franz Thonner, Dr. Otto Stapf, F.R.S., 333
Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, Wilhelm Wundt, Rev. A. E. Crawley, 334
The Problem of Age, Growth and Death: a Study of Cytomorphosis, Prof. Charles S. Minot, 335
Kunst und Vogelgesang in ihren wechselseitigen Beziehungen von naturwissenschaftlich-musikalischen Standpunkte beleuchtet, Dr. B. Hoffmann, 336
The Scientific Aspects of Luther Burbank's Work, D. S. Jordan and V. L. Kellogg, 337
Text-book of Petrology, Containing a Summary of the Modern Theories of Petrogenesis, a Description of the Rock-forming Minerals, and a Synopsis of the Chief Types of the Igneous Rocks and their Distribution, as Illustrated by the British Isles, Dr. F. H. Hatch, 337
Catalogue of the Lepidoptera Phalænæ in the British Museum, Sir George F. Hampson, Bart., 338
Physikalische Musiklehre, Dr. Hermann Starke, 338
The Book of Nature-study, 344
Insect Stories, Vernon L. Kellogg, 344
Alpines and Bog Plants, Reginald Farrer, 344
Life-histories of Familiar Plants, John J. Ward, 344
A Student's Text-book of Zoology, Prof. Adam Sedgwick, F.R.S., Prof. G. H. Carpenter, 361
A Treatise on Zoology: Crustacea, Dr. W. T. Calman, Prof. G. H. Carpenter, 361
The Flora of the Presidency of Bombay, Dr. Theodore Cooke, 362
The Elements of Physical Chemistry, Prof. J. Livingston R. Morgan, 362
Outlines of Physical Chemistry, Dr. George Senter, 363
Transformers, for Single and Multiphase Currents: a Treatise on their Theory, Construction and Use, Prof. Gisbert Kapp, 365
Electrical Engineer's Pocket Book, a Handbook of Useful Data for Electricians and Electrical Engineers, Horatio A. Foster, 365
Human Foods and their Nutritive Value, H. Snyder, C. Simmonds, 366
The Body at Work: a Treatise on the Principles of Physiology, Dr. Alex. Hill, 366
British and American Customary and Metric Legal Measures for Commercial and Technical Purposes, N. Foley, 367
Leitfaden der Tierkunde für höhere Lehranstalten, K. Smalian, 367
Bau und Geschichte der Erde, O. Abel, 367
Goethe und Pestalozzi, Karl Muthesius, 368
La France et ses Colonies au Début du XX^e Siècle, M. Fallex and A. Mairey, 368
The Interpretation of Radium, Frederick Soddy, 368
Flower and Grass Calendars for Children, Agnes Fry, 368
The Bāz-Nāma-yi-Nāsirī, a Persian Treatise on Falconry, Lieut.-Col. D. C. Phillott, 371
Transactions of the English Ceramic Society, Vol. vii., 385
The Fertilisation of Tea, George A. Cowie, 385
Lectures on the Evolution of the Filicinean Vascular System, A. G. Tansley, 391
Heavy Electrical Engineering, H. M. Hobart, Prof. Gisbert Kapp, 392
Zur Biologie des Chlorophylls, Laubfarbe und Himmelslicht, Vergilbung und Etiolement, Ernst Stahl, 393
Grundlagen der Geometrie, D. Hilbert, 394
The Theory of Valency, Dr. J. Newton Friend, 395
The Geology of the Goldfields of British Guiana, J. B. Harrison, 395
The Ore Deposits of South Africa, J. P. Johnson, 395
The Method and Scope of Genetics, Prof. W. Bateson, F.R.S., 396
Hydraulic Générale, A. Boulanger, 396
The Chadwick Lectures, University of London, Session 1907–8, W. D. Scott-Moncrieff, 397
Der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg, Otto Schoetensack, Dr. William Wright, 398
The Carnegie Foundation for the Advancement of Teaching, Prof. John Edgar, 399
The Norwegian Aurora Polaris Expedition, 1902–3, Vol. i., on the Cause of Magnetic Storms and the Origin of Terrestrial Magnetism, Kr. Birkeland, 410
Festschrift der Physikalisch-medizinischen Societät zu Erlangen, zur Feier ihres 100 Jährigen Bestehens am 27 Juni, 1908, 411
Sitzungsberichte der Physikalisch-medizinischen Societät in Erlangen, 411
Scientific Papers, Sir George Howard Darwin, K.C.B., F.R.S., 421
The Manufacture of Paper, R. W. Sindall, 422
Mineralien-Sammlungen, ein Hand- und Hilfsbuch für Anlage und Instandhaltung mineralogischer Sammlungen, Dr. Wolfgang Brendler, 423
Das Pflanzenreich: Scrophulariaceæ–Calceolarieæ, Fr. Kränzlin; Erythroxylaceæ, O. E. Schultz; Styracaceæ, J. Perkins; Potamogetonaceæ, P. Ascherson and P. Graebner; Orchidaceæ–Cœlogyninæ, E. Pfitzer and Fr. Kränzlin; Liliaceæ–Aloïneæ, A. Berger; Sarraceniaceæ, J. M. Macfarlane; Stylidiaceæ, J. Mildbraed; Nepenthaceæ, J. M. Macfarlane; Araceæ–Monsteroideæ and Calloideæ, A. Engler and K. Krause, 424
The Human Species, Considered from the Standpoint of Comparative Anatomy, Physiology, Pathology, and Bacteriology, Ludwig Hopf, 424
Practical Physics, L. M. Jones, 425
Handbuch für physikalische Schülerübungen, Prof. Hermann Hahn, 425
School Algebra, W. E. Paterson, 426
Eliza Brightwen: the Life and Thoughts of a Naturalist, 426
The Grammar of Life, G. T. Wrench, 426
The Life of Philibert Commerson, D.M., Naturalist du Roi: an Old-World Story of French Travel and Science in the Days of Linnæus, Captain S. Pasfield Oliver, 430
Sunset Playgrounds: Fishing Days and Others in California and Canada, F. G. Aflalo, 431
The Water Supply of Kent, William Whitaker, F.R.S., Dr. H. Franklin Parsons, Dr. H. R. Mill, and Dr. J. C. Thresh, 432
Experimental Embryology, J. W. Jenkinson, 451
Plants and their Ways, an Introduction to the Study of Botany and Agricultural Science, E. Evans, 452
Mikroskopischer und physiologischer Praktikum der Botanik für Lehrer, G. Müller, 452
A First Book of Botany, Elizabeth Healey, 452
Familiar Swiss Flowers, F. E. Hulme, 452
The Transformations of the Animal World, Charles Depéret, 452

Vorlesungen über chemische Atomistik, Dr. F. Willy Hinrichsen, 453
First Principles of Chemical Theory, Dr. C. H. Mathewson, 453
Malleable Cast Iron, S. Jones Parsons, 454
A Manual of Infectious Diseases, Dr. E. W. Goodall and Dr. J. W. Washbourn, 454
Beschrijving en Onderzoek van den gyroscopischen Horizon Fleuriais (Model Ponthus et Therrode), L. Roosenburg, 455
Revue de Géographie annuelle, 455
Notes on Dynamics, Sir G. Greenhill, 455
Notes of a Botanist on the Amazon and Andes, Richard Spruce, 458
National Antarctic Expedition, 1901–4, 460
Annals of the Astronomical Observatory of Harvard College, a Search for a Planet beyond Neptune, W. H. Pickering, 463
Darwin and Modern Science, Essays in Commemoration of the Centenary of the Birth of Charles Darwin and of the Fiftieth Anniversary of the Publication of the "Origin of Species," Prof. R. Meldola, F.R.S., 481
Untersuchungen über Kohlenhydrate und Fermente (1884–1908), Emil Fischer, 485
Die Grundproben der "Deutschen Tiefsee-Expedition," Sir John Murray and Prof. E. Philippi, 486
History of the Geological Society of Glasogw, 1858–1908, with Biographical Notices of Prominent Members, 487
Unités Électriques, le Comte de Baillehache, Dr. J. A. Harker, 488
Traité de Mathématiques générales a l'usage des Chimistes, Physiciens, Ingénieurs, et des Élèves des Facultés des Science, Prof. E. Fabry, 488
Probleme der Protistenkunde: I. Die Trypanosomen ihre Bedeutung für Zoologie, Medizin und Kolonialwirtschaft, Prof. F. Döflein, 489
American Philosophy: the Early Schools, Prof. I. W. Riley, 489
The Photography of Coloured Objects, Dr. C. E. Kenneth Mees, 489
The Nautic-Astronomical and Universal Calculator, R. Nelting, 490
The Theory of Electric Cables and Networks, Dr. Alexander Russell, 490
Studies of Frost and Ice Crystals, Wilson J. Bentley, 492
Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, Andrew Balfour, 495

Reynolds (J. Emerson), Results of Cooling Hydrated Platincyanides in Liquid Air, 297
Reynolds Reflector at Helwan, Egypt, the Proposed Programme of Work for the, Knox Shaw, 19
Ricco (Prof.), Recent Solar Research, 288
Richards (Ellen H.), Laboratory Notes on Industrial Water Analysis, a Survey Course for Engineers, 215
Richardson (H. W.), Effect of an Air Blast upon the Spark Dicharge of a Condenser charged by an Induction Coil or Transformer, 239
Ricketts (Dr.), the Transmission of "Spotted Fever," 436
Ridgeway (Prof.), Origin of the Turkish Crescent, 407
Rigden (H.), Sussex Cattle, 317
Righi (Prof. Augusto), Integration of the Equations of Motion of an Electron Describing an Orbit about an Ion in a Magnetic Field, 168
Right-handedness, Problem of Man's, Prof. E. Gaupp, 500
Riley (Prof. I. W.), American Philosophy: the Early Schools, 489
Rings of Saturn, the, Prof. Levi-Civito, 439
Ripley (Prof. W. Z.), European Population of the United States, 501
Ristenpart (Prof. F.), Comet Morehouse, 1908*c*, 260
Ritchey (Dr. G. W.), the 60-inch Reflecting Telescope of the Mount Wilson Observatory, California, 209
Road Motors and Problems Connected with Them, "James Forrest" Lecture at Institution of Civil Engineers, Colonel H. C. L. Holden, F.R.S., 323
Roads, Conference on, 292
Roads, Construction and Wear of, H. A. R. Mallock, F.R.S., 141
Robbins (W. W.), Plant Distribution on "Mesas" near Boulder, Colorado, 76–7
Roberts (Charles G. D.), the House in the Water, 129
Rock-engravings in South Africa, L. Péringuey, 411; Corr., R. Lydekker, 438
Rodriguez (Joas Barbosa), Death of, 47; Obituary Notice of, 104
Röhmann (Dr. F.), Biochemie, ein Lehrbuch für Mediziner, Zoologen und Botaniker, 6
Rolleston (T. W.), Parallel Paths: a Study in Biology, Ethics and Art, 35
Rolston (William E.), Astronomy of To-day, Dr. Cecil G. Dolmage, 181; Scientific Ideas of To-day, Charles R. Gibson, 181; the Evolution of the Atmosphere as a Proof of Design in Creation, John Phin, 216; the Recent Solar Activity, 320
Romanes (J.), the Boulders of the Cambridge Drift, 359
Romanichels, the, Bob Skot, 318
Röntgen Rays, Ionisation by, Dr. Charles G. Barkla, 187; *see* Radiography
Roosenburg (L.), Beschrijving en Onderzoek van der Gyroscopischen Horizon Fleuriais (Model Ponthus et Therrode), 455
Rosaries, United States National Museum Collection of, I. M. Casanowicz, 502
Rosenhain (Walter), the Microscope in Engineering, 250
Rosenhain (Mr.), Automatic Recorder of Carbon Dioxide, 259
Rosenstiehl (A.), the Chromatic Circle according to Young's Hypothesis, 389
Ross (A. D.), Magnetic Properties of Certain Copper Alloys, 59
Ross (E. H.), Mosquitoes and Malaria at Port Said, 286
Ross (H. C.), Determination of a Coefficient by which the Rate of Diffusion of Stain and Other Substances into Living Cells can be Measured, and by which Bacteria and Other Cells may be Differentiated, 27
Ross (Prof. Ronald, F.R.S.), the Campaign against Malaria, Discourse at Royal Institution, 415
Rossi (R.), Emission Spectrum of Silver Heated in a Carbon-tube Furnace in Air, 168
Rota (Lieut.-Colonel G.), Steamer Trials with Various Kinds of Screws, 173
Rotation of the Sun, the, Prof. W. S. Adams, 141
Rotch (Prof. A. Lawrence), General Results of the Meteorological Cruises of the *Otaria* on the Atlantic in 1905, 1906, and 1907, 219
Roy (Paul), Determination of Added Water in Decomposed Milks, 270
Royal Anthropological Institute, 110, 298, 359, 387
Royal Astronomical Society, 209, 387
Royal Dublin Society, 88, 179, 388, 479; Scientific Transactions of the, 289
Royal Institution: Explosive Combustion, with Special Reference to that of Hydrocarbons, Prof. W. A. Bone, F.R.S., at, 8; the Cell as the Unit of Life, and Other Lectures delivered at the Royal Institution, London, 1899–1902, an Introduction to Biology, Allan Macfadyen, 123; the Electrical Properties of Flame, Prof. H. A. Wilson, F.R.S., 143; Transatlantic Wireless Telegraphy, Commendatore G. Marconi at, 233, 264; Tantalum and its Industrial Applications, Alex. Siemens at, 290; the Campaign against Malaria, Prof. Ronald Ross, F.R.S., at, 415
Royal Irish Academy, Dublin, 88
Royal Meteorological Society, 119, 298, 387
Royal Microscopical Society, 59, 178, 327, 448
Royal Observatory, Greenwich, the, 446
Royal Prussian Aëronautical Observatory's Aërological Expedition to Tropical East Africa, the, Profs. R. Assmann and A. Berson, 171
Royal Society, 27, 57, 86, 118, 147, 178, 238, 268, 296, 326, 358, 386, 477; the Royal Society's Conversazione, 347; the Yielding of the Earth to Disturbing Forces, Prof. A. E. H. Love, F.R.S., at, 253
Royal Society of Arts and the London Institution, the, 100
Royal Society, Edinburgh, 59, 148, 328, 478
Royal Society of South Africa, Cape Town, 360
Royal-Dawson (W. G.), the Production of Prolonged Apnœa in Man, 8

Rural Education in its Various Grades, 174
Russ (Sidney), the Radio-active Deposits of Actinium, 8; Expulsion of Radio-active Matter in the Radium Transformations, 238
Russell (Dr. Alexander), the Theory of Electric Cables and Networks, 490
Russell (Alexander S.), the γ Rays of Uranium, 7
Russell (Dr.), the Arthur Wright Electrical Device for Evaluating Formulæ and Solving Equations, 509
Russell (Dr. E. J.), Elementary Agricultural Chemistry, Herbert Ingle, 93; Some Aspects of the Wheat Problem, 282
Russell (E. S.), Growth of the Shell of *Patella vulgata*, L., 87
Rustafjaell (Robert de), Palæolithic Vessels of Egypt, or the Earliest Handiwork of Man, 246
Ruwenzori: an Account of the Expedition of H.R.H. Prince Luigi Amedeo of Savoy, Duke of the Abruzzi, F. de Filippi, Prof. J. W. Gregory, F.R.S., 281
Ryan (Prof. Hugh), Analysis of Beeswax, 479; Montanin and Montana Waxes, 479

Sabatier (Paul), New General Method for the Preparation of the Alcoholic Amines, 209
Sabersky (E.), New Electrical Hardening Furnace, 209
Sadler (C. A.), the Absorption of X-rays, 37; Transformations of X-rays, 327
Saget (P.), Variety of Organic Iron in Plants, 30
Sagittarius, a Group of Red Stars in, Mrs. Fleming, 288
Salensky (Dr. W.), Development of the Nemertine Worm *Prosorochmus viviparus*, 197
Samec (Dr. M.), Variation in Intensity of Light at Different Altitudes, 17
Sanitation: Principles of Sewage Treatment, Prof. Dunbar, Edward Ardern, 5; Sewer Construction, Prof. Henry N. Ogden, Edward Ardern, 5; Modern Methods of Sewage Disposal, W. H. Trentham and J. Saunders, Edward Ardern, 5; the Essentials of Sanitary Science, Gilbert E. Brooke, 182; Death and Obituary Notice of Dr. John Thomson, 315; the Chadwick Lectures, University of London, Session 1907–8, W. D. Scott-Moncrieff, 397
Sarcophagi, Ancient, used in Modern Interments, 351
Sars (Prof. G. O.), an Account of the Crustacea of Norway, 184
Satellites, Origins of, Prof. See, 380
Saturn, the Rings of, Prof. Levi-Civito, 439
Saunders (J.), Modern Methods of Sewage Disposal, 5
Saussure (Dr. Henri de), Biologia Centrali-Americana, Orthoptera, Vol. i., 241
Savage (Dr.), Bacterial Contamination of Milk, 203
Savés (A.), Determination of Physical Constants of the Peptones, 59
Sawicki (Dr. L. Ritter von), the Rhine-Rhone Water-parting, 258
Scallop, the Structure of the, 273
Schäfer Method of Artificial Respiration in Case of the Apparently Drowned, 138
Scheel (Dr.), Methods of High Vacua, 50; Relative Efficiencies of Methods for the Production of High Vacua, 438
Schelle (Prof. R.), Production of Pure Tellurium from its Ores, 470
Schenck (Dr. H.), Phylogeny of the Bryophytes and Ferns, 49
Schlesinger (Dr.), Errors of Position of Images Photographed through Glass, 503
Schlich's Manual of Forestry, W. R. Fisher, 35
Schmatolle (Mr.), Gas-firing, 385
Schmeltz (Dr. J. D. E.), Death and Obituary Notice of, 405
Schoetensack (Otto), der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg, 398
Schryver (Dr. S. B.), the General Characters of the Proteins, 307
Schulz (J. F. Hermann), the Constitution of the Sun, 51
Schulz (O. E.), das Pflanzenreich, Erythroxylaceæ, 424
Schweidler (Dr. E. von), Evolution of Heat by Radium, 18
Science: Science in Modern Life, 1; Scientific Research and the Carnegie Trust, 20; Scientific Aid for the British Tenant Farmer, 51; the British Science Guild, Sir William Ramsay, 52; Sir Frederick Pollock, 52; Forthcoming Books of Science, 53; Supplementary List of Forthcoming Books of Science, 85; Scientific Societies and the Admission of Women Fellows, Dr. T. E. Thorpe, C.B., F.R.S., 67; the Promotion of Scientific Research, Walter B. Priest, 68; Prize Subjects for Scientific Research, 80; Scientific Work of the Smithsonian Institution, Dr. C. D. Walcott, 114; the Encouragement of Research, Dr. E. H. Griffiths, F.R.S., 127; Research and the Colleges, W. P. Dreaper, 128; Scientific Ideas of To-day, Charles R. Gibson, William E. Rolston, 181; Aus der Werkstatt grosser Forscher, Dr. Friedrich Dannemann, 182; the Ancient Greeks and Natural Science, Edward Greenly, 224; Popularising of Scientific Knowledge, 257; an Inquiry concerning Scientific and Medical Journals, Prof. Karl Pearson, F.R.S., 276; Sammlung Naturwissenschaftlich-pädagogischer Abhandlungen, Prof. J. A. Green, 304; Scientific Papers, Vol. ii., Tidal Friction and Cosmogony, Sir George Howard Darwin, K.C.B., F.R.S., 421; the Need of a Great Reference Library of Natural Science in London, Sir E. Ray Lankester, K.C.B., F.R.S., 427; the South-Eastern Union of Scientific Societies, 476
Scott (Dr. D. H., F.R.S.), the Flora of the Wealden Strata, 476
Scott-Moncrieff (W. D.), the Chadwick Lectures, University of London, Session 1907–8, 397
Scrivenor (J. B.), the Lahat "Pipe," 298
Sea and Seashore, the Story of the, W. Percival Westell, 129
Sedgwick (Prof. Adam, F.R.S.), the Natural History Museum, 229; a Student's Text-book of Zoology, 361
See (Prof. T. J. J.), the Circularity of Planetary Orbits, 229; Origins of Satellites, 380
Sehnal (J.), Solubility of Lead Sulphate, 449
Seismology: the California Earthquake of April 18, 1906, Andrew C. Lawson, 10; Depth of the Epicentre of Recent Sicilian Earthquake, Dr. Emilio Oddone, 168; Records of the Calabrian Earthquake obtained at Pulkowa, Prince Galitzin, 226; the Calabrian Earthquake of October 23, 1907, Prof. G. Mercalli, 318; Seismological Service established in Italy after the Riviera Earthquake of February 23, 1887, Dr. G. Agamennone, 438; the Cause of Earthquakes, Prof. Hobbs, 444; the Italian Earthquake of December 28, 1908, Dr. G. Martinelli, 445; Secondary Oscillation Recorded by the Tide-gauge at Ischia, Prof. Grablovitz, 466; *see also* Earthquakes
Seligman (Dr.), Gas-firing, 385
Seligmann (Dr. C. G.), Canoe Ornamental Carvings from South-eastern British New Guinea, 106; the Veddas, 119; Photographs of the Veddas of Ceylon and of their Ceremonial Dances, 349
Senderens (Jean B.), Catalytic Preparation of the Ketones, 210; New Method of Preparing Ethyl Ether, 471–2
Sense of Proximity, the, Charles H. Melland, 456
Sense of Smell in Flies, Dr. Alex. Hill, 308
Senses, Are the, ever Vicarious? Prof. John G. McKendrick, F.R.S., 38
Senter (Dr. George), Outlines of Physical Chemistry, 363
Serotherapy: Pathogenesis of *Micrococcus melitensis*, Dr. J. Eyre, 328
Sewage: Principles of Sewage Treatment, Prof. Dunbar, Edward Ardern, 5; Sewer Construction, Prof. Henry N. Ogden, Edward Ardern, 5; Modern Methods of Sewage Disposal, W. H. Trentham and J. Saunders, Edward Ardern, 5; the Chadwick Lectures, University of London, Session 1907–8, W. D. Scott-Moncrieff, 307
Sevewetz (A.), Oxidation of Aromatic Nitro- and Nitroso-derivatives by Ammonium Persulphate, 300
Shackleton (Lieut.), Scientific Achievements of British Antarctic Expedition under, 377
Shackleton's (Lieut.) Antarctic Expedition: (1) Explorations and Results, (2) the South Magnetic Pole, Dr. C. Chree, F.R.S., (3) Meteorological Observations, W. H. Dines, F.R.S., (4) Biological Results, 130
Shattock (S. G.), Microscopic Section of the Aorta of King Menephtah, 340
Shaw (A. N.), Phenomenon Connected with the Dicharge of Electricity from Pointed Conductors, with a Note by John Zeleny, 297

Shaw (Knox), the Proposed Programme of Work for the Reynolds Reflector at Helwan, Egypt, 19
Shaxby (John H.), Early References to Fluorescence and Light Transmitted by Thin Gold Films, 128; *Lignum Nephriticum*, 248; the Graphical Determination of Fresnel's Integrals, 269
Shelford (Robert), Biologia Centrali-Americana, Orthoptera, Vol. ii., Phasmidæ, 241
Sheppard (Dr. S. E.), Influence of their State in Solution on the Absorption Spectra of Dissolved Dyes, 118
Sherrington (Prof. C. S.), Reciprocal Innervation of Antagonistic Muscles, Note xiv., Double Reciprocal Innervation, 326
Shipley (Dr. A. E., F.R.S.), a Student's Text-book of Zoology, Vol. iii., the Insecta and Arachnida, 361
Ships' Compasses, an Explanation of the Adjustment of, Commander L. W. P. Chetwynd, 276
Shrubsall (Dr. F. C.), Crania and Bones from Ancient Ruins in Rhodesia, 379
Shuddemagen (C. L. B.), Method of Making Condensers with Pure Paraffin Wax, 502
Siemens (Alex.), Tantalum and its Industrial Applications, Discourse at Royal Institution, 290
Simmonds (C.), the Poisons of the Pharmacy Act, 191; Human Foods and their Nutritive Value, H. Snyder, 366
Simpson (J. C.), Specimen of Pelagothuria from the Seychelles, 88
Sindall (R. W.), the Manufacture of Paper, 422
Skinner (Frank W.), Foundations of Lofty Buildings in American Practice, 78
Skot (Bob), the Romanichels, 318
Sladen, the Percy, Trust Expedition to the Indian Ocean, J. Stanley Gardiner, F.R.S., 321; J. C. Fryer, 321
Sleep for Children, Hours of, 79
Sleeping Sickness: Kleine's Observations on the Period during which the Tsetse-fly was Capable of Transmitting a Trypanosome Infection, Sir David Bruce, 315; Latency in Infectivity of Tsetse-flies, Colonel Sir David Bruce, 436
Smalian (K.), Leitfaden der Tierkunde für höhere Lehranstalten, 367
Smell, Sense of, in Flies, Dr. Alex. Hill, 308
Smell, Vapour-density and, Dr. E. P. Perman, 369; Dr. Alex. Hill, 427
Smith (C. E.), Trees shown to the Children, 192
Smith (Dempster), Lathe Design for High- and Low-Speed Steels, 33
Smith (Eva M.), Surfaces having a Family of Helices as One Set of Lines of Curvature, 140
Smith (Geoffrey), Anaspidacea, 435
Smith (Prof. G. Elliot, F.R.S.), the Zoological Position of Tarsius, 38; Beiträge zur Naturgeschichte des Menschen, Dr. Gustav Friedenthal, 211; Origin of the People of Egypt, 407; Anatomical Results of Excavations in Nubia, 466
Smith (J. Cruickshank), Physical Tests for Protective Coatings for Iron and Steel, 384
Smith (J. Russell), the Story of Iron and Steel, 126
Smith (Dr. Letchworth), Death of, 224
Smith (Prof. R. H.), Easement Curves, 467
Smith (Dr. S. W. J.), Action between Metals and Acids and the Conditions under which Mercury Causes Evolution of Hydrogen, 239
Smith (T.), Method of Testing Photographic Shutters, 419
Smith (Worthington G.), Synopsis of the British Basidiomycetes, a Descriptive Catalogue of the Drawings and Specimens in Department of Botany, British Museum, 184
Smithells (Prof. Arthur, F.R.S.), Leçons sur le Carbone, la Combustion, les Lois chimiques, H. le Chatelier, 331
Smithsonian Institution, Scientific Work of the, Dr. C. D. Walcott, 114
Smyth (Dr. Wm. Woods), the Inheritance of Acquired Character, 277
Snails, a Winter Retreat for, W. Hoskyns-Abrahall, 96
Snell (F. C.), Nature Studies by Night and Day, 129
Snell (Dr. Simeon), Death and Obituary Notice of, 256
Snow (A. E.), Pirani's Method of Measuring the Self-inductance of a Coil, 147–8
Snyder (H.), Human Foods and their Nutritive Value, 366
Society of Chemical Industry, Education and Research in Applied Chemistry, Prof. Raphael Meldola, F.R.S., 413
Sociology: Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, Wilhelm Wundt, Rev. A. E. Crawley, 334
Soddy (Frederick), the γ Rays of Uranium, 7; Radiothorium, 12; the Rays of Uranium X, 37; Production of Radium from Uranium, 308; the Interpretation of Radium, 368
Solar Activity, the Recent, W. E. Rolston, 320
Solar Atmosphere, the Upper Layers of the, M. Deslandres, 354
Solar Constant, the Determination of the, Messrs. Abbot and Fowler, jun., 468; L. B. Aldrich, 468
Solar Parallax from Observations of Eros, Prof. Perrine, 468
Solar Research, Recent, Prof. Ricco, 288
Solar Research, Transactions of the International Union for Cooperation in, 134
Solar Temperature, Sun-spots and, Mr. Evershed, 169
Solar Vortices, Hale's, A. Brester, 79
Sollas (Prof. W. J., F.R.S.), Anniversary Address, Time in Relation to Geological Events, 118
Solomon (Maurice), an Elementary Manual of Radiotelegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., 65; la Télégraphie sans Fil et les Applications pratiques des Ondes électriques, Albert Turpain, 65; Jahrbuch der drahtlosen Telegraphie und Telephonie, 65
Songs of Birds: Kunst und Vogelgesang in ihren wechselseitigen Beziehungen von naturwissenschaftlich-musikalischen Standpunkte beleuchtet, Dr. B. Hoffmann, 336
South-Eastern Union of Scientific Societies, the, 476
Space, the Apparent Dispersion of Light in, Prof. Lebedew, 169
Spectrographs, Camera Objectives for, Mr. Plaskett, 440
Spectrum Analysis: Variation of Refractive Indices of Mixtures of Liquids with their Composition, Dr. V. F. Hess, 18; the Spectra of Various Nebulæ, Prof. Wolf, 19; Spectra of Nebulæ, Prof. Wolf, 229; Dr. Eberhard, 229; Anomalous Refraction and Spectroheliograph Results, Prof. Julius, 50; Wave-lengths of Lines in the Secondary Spectrum of Hydrogen, H. E. Watson, 86; a Remarkable Prominence, Father Chevalier, 108; Influence of their State in Solution on the Absorption Spectra of Dissolved Dyes, Dr. S. E. Sheppard, 118; Comparison of the Lines of the Spectrum of the Electric Arc and of the Sun, Pressure of the Reversing Layer in the Solar Atmosphere, Ch. Fabry and H. Buisson, 149; Spectrum of the Comet 1908c (Morehouse), A. de la Baume-Pluvinel and F. Baldet, 149; Observations made at Meudon Observatory on Morehouse's Comet, H. Deslandres, A. Bernard and J. Bosler, 179; the Spectrum of Morehouse's Comet, Prof. Hartmann, 380; Resonator Sparks, their Spectroscopic Analysis, G. A. Hemsalech and A. Zimmern, 140; the Gases of the Ring Nebula in Lyra, Prof. Bohuslav Brauner, 158; Emission Spectrum of Silver Heated in a Carbon-tube Furnace in Air, G. Duffield and R. Rossi, 168; a Simple Fabry and Perot Interferometer, Prof. James Barnes, 187; New Type of Magnetic Decomposition of the Absorption Bands of Crystals, Jean Becquerel, 209; the Orbits of Spectroscopic Binaries, R. H. Baker, 229; F. C. Jordan, 229; Spectroscopic Binaries, Prof. Campbell, 321; Dr. Heber D. Curtis, 321; Prof. W. H. Wright, 321; General Solution of the Spectroheliograph, H. Deslandres, 239; Chromospheric Calcium Lines in Furnace Spectra, Dr. A. S. King, 260; Examination of the Upper Layers of Calcium and Hydrogen in the Solar Atmosphere and of the Same Black Filaments in the Two Layers, H. Deslandres and L. d'Azambuja, 269; G. E. Hale, 269; the Complex Structure of Some Lines in Spectrum of Mercury, H. Nagaoka, 319; Origin of the Colours of the Spectrum, Prof. P. Zeeman, 319; Examination of Zeeman Effect for Certain Bands in the Emission Spectra of Gases, A. Dufour, 352; Spectra of Some Spiral Nebulæ and Globular Star Clusters, E. A. Fath, 354; Spectrum of the Ruby, J. Moir, 360; a General Solution of the Spectroheliograph, M. Deslandres, 380; Spectroscopic Comparison of *o* Ceti with Titanium

Oxide, A. Fowler, 387; Critical Examination of the Monochromatic Images of the Sun with the Hydrogen Lines, H. Deslandres and L. d'Azambuja, 389; Unsymmetrical Enlargement of the Lines of the Arc Spectrum and their Comparison with Those of the Solar Spectrum, Ch. Fabry and H. Buisson, 389; Spectrum of Magnesium in Hydrogen, E. E. Brooks, 410; Influence of Dilution on the Colour and the Absorption Spectra of Various Permanganates, J. E. Purvis, 420; Camera Objectives for Spectrographs, Mr. Plaskett, 440; the Ruling of Diffraction Gratings, Prof. A. A. Michelson, 444; Effect of Temperature on the Absorption of Certain Solutions, Prof. H. C. Jones, 444; Spectroscopic Researches, E. J. Evans, 508; Prof. R. W. Wood, 508; the Echelon Spectroscope, H. Stansfield, 509
Spencer (Prof. Baldwin), a Problematical Organism Thrown up during a Storm in Bass Strait, 350
Sphenodon, Unusual Condition of Nasal Bones in, H. W. Unthank, 69
Spherical Astronomy, a Treatise on, Sir Robert Ball, F.R.S., 123
Spiral Nebulæ, Spectra of Some, and Globular Star Clusters, E. A. Fath, 354
Spruce (Richard), Notes of a Botanist on the Amazon and Andes, 458
Squier (Major George O.), Recent Progress in Aëronautics, 223
Stahl (Ernst), zur Biologie des Chlorophylls, Laubfarbe und Himmelslicht, Vergilbung und Etiolement, 393
Standard Scale of Photographic Magnitudes, Prof. Pickering, 380
Stanley (W. N.), Cupellation Experiments, the Thermal Properties of Cupels, 388
Stansfield (H.), the Echelon Spectroscope, 509
Stapf (Dr. Otto, F.R.S.), Fluorescence of *Lignum Nephriticum*, 218; die Blütenpflanzen Afrikas, Franz Thonner, 333
Starke (Dr. Hermann), Physikalische Musiklehre, 338
Stars: the Recent Magnitudes of Nova Persei, Prof. Nijland, 19; Radial Velocity of α Persei, F. Goos, 51; Double-star Measures, Prof. Burnham, 19; Measures for Double Stars, Dr. Lau and Herr Luplau-Janssen, 200; a New "Cave-nebula" in Cepheus, Prof. Wolf, 19; a Catalogue of 1625 Southern Stars, Ernest Cooke, 51; Stellar Evolution, Prof. Moulton, 79; Relation between the Magnitudes and Colours of Stars, Herren Müller and Kempf, 108; Colours and Magnitudes of Stars, Mr. Franks, 288; Miss Bell, 288; Common Motions of the Principal Ursæ Majoris Stars, Dr. Ludendorff, 141; Observations of Variable Stars, Prof. Nijland, 142; Coloured Stars in the Globular Cluster M13, Prof. Barnard, 169; a Group of Red Stars in Sagittarius, Mrs. Fleming, 288; SS Aurigæ (31.1907) an Irregular Variable, Prof. Hartwig, 288; Mercury as an Evening Star, 320; Spectra of Some Spiral Nebulæ and Globular Star Clusters, E. A. Fath, 354; the Birth of Worlds, Prof. A. W. Bickerton, 380; the Variable Star (6.1909) Ursæ Majoris, Prof. Wolf, 410
Stead (J. E., F.R.S.), Simple Method of Illuminating Opaque Objects, 168
Steam Boilers, Heat Transmission in, 144
Steel: the Manufacture of Basic Steel, 135; Rapid Methods for the Chemical Analysis of Special Steels, Steel-making Alloys and Graphite, C. M. Johnson, 272
Steer (Edward J.), Persistent Trail of a Meteor on March 14 248
Stein (Dr. M. A.), Geographical and Archæological Explorations in Chinese Turkestan in 1906–8, 47
Stephenson (J.), Osmotic Pressures of Weak Solutions of Calcium Ferrocyanide, 28
Stern (J. G. L.), Application of the Platinum Resistance Thermometer to the Determination of Molecular Weights in Fused Potassium Nitrate as a Solvent, 168
Stodel (G.), Sterilisation of Milk by the Ultra-violet Rays, 60
Stœcklin (E. de), Oxidation of the Polyhydric Alcohols by a Peroxydasic System, 449
Stoney (Dr. Bindon Blood, F.R.S.), Death and Obituary Notice of, 315
Stopes (Marie C.), Plant-containing Nodules from Japan, 119
Stopes (Dr. Marie), the Tent-building Habits of the Ant *Lasius niger*, Linn., 388
Storie (G. B.), Steam Plant Trials at the Greenvale Mill, Littleborough, 50
Störring (Dr. Gustav), Mental Pathology in its Relation to Normal Psychology, a Course of Lectures delivered in the University of Leipzig, 216
Strahan (Dr. A., F.R.S.), "Blowing" Wells, 370
Strange and Graham, Ltd. (Messrs.), a Process of Making Ribbon Metals, 348
Stromeyer (C. E.), Ageing of Mild Steel and the Influence of Nitrogen, 385
Stroobant (Prof.), Diameter and Position of Mercury, 200
Structural Geography, Prof. J. W. Gregory, F.R.S., 157; the Reviewer, 157
Structures, the Theory and Design of, Ewart S. Andrews, 64
Strutt (Hon. R. J., F.R.S.), Leakage of Helium from Radio-active Minerals, 147; a Direct Estimate of the Minimum Age of Thorianite, 308
Stubbs (F.), Use of Wind by Migrating Birds, 120
Sudan, Handbook for Egypt and the, 155
Sudan, Third Report of the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, Andrew Balfour, 495
Suess (E.), the Face of the Earth, 91
Sugar-canes, Importation of, Regulations for British Guiana, 286
Summer Season Time Bill, the, 45
Sun: the Constitution of the Sun, J. F. Hermann Schulz, 51; M. A. Amaftounsky, 51; the Rotation of the Sun, Prof. W. S. Adams, 141; Pressure in the Sun's Atmosphere, MM. Fabry and Buisson, 229; Partial Eclipse of the Sun in Canada, Dr. Downing, 320; Changes in the Figure and Dimensions of the Sun, Prof. Moulton, 439
Sun-spots, the Levels of, A. W. Dobbie, 19
Sun-spots and Solar Temperature, Mr. Evershed, 169
Sunset Playgrounds: Fishing Days and Others in California and Canada, F. G. Aflalo, 431
Surveying: Conference on Roads, 292; Hydrographical Surveying, Rear-Admiral Sir William J. L. Wharton, K.C.B., 307
Swann (W. F. G.), Specific Heat of Air and Carbon Dioxide at Atmospheric Pressure, by the Continuous Electrical Method, at 20° C. and 100° C., 238
Swiss Flowers, Familiar, F. E. Hulme, 452
Sy (M.), Comet Tempel$_2$-Swift, 1908*d*, 79
Szyszkowski (Prof. B. de), Radio-activity in Relation to Morozoff's Theory of the Constitution of Atoms, 276

Tabouriech (P. J.), Variety of Organic Iron in Plants, 30
Tansley (A. G.), Lectures on the Evolution of the Filicinean Vascular System, 391
Tantalum and its Industrial Applications, Alex. Siemens at the Royal Institution, 290
Tarsius, the Zoological Position of, Prof. G. Elliot Smith, F.R.S., 38
Taylor (Miss A. M.), Two New Parasites of the Black-currant Mite, 447
Taylor (Rev. J.), Botanical Discoveries near Dover, 258
Taylor (R. L.), Colour Demonstrations of the Dissociating Action of Water, 328
Tea, the Fertilisation of, George A. Cowie, 385
Teaching of Geometry, the, Prof. George M. Minchin, F.R.S., 373
Technical Colleges, the Functions of, Dr. George T. Beilby, F.R.S., at Association of Technical Institutions, 22
Technical Education, the Defects of English, and the Remedy, Dr. Robert Pohl at the Association of Teachers in Technical Institutions in Huddersfield, 205
Technical Institutions, the Association of, 446
Technology: the Manufacture of Paper, R. W. Sindall, 422
Telegraphy: Wireless, Long-distance Messages, 14; an Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., Maurice Solomon, 65; la Telegraphie sans Fil et les Applications pratiques des Ondes électriques, Albert Turpain, Maurice Solomon, 65; Jahrbuch der drahtlosen Telegraphie und Telephonie, Maurice Solomon, 65;

Transatlantic Wireless Telegraphy, Commendatore G. Marconi at Royal Institution, 233, 264; Selective Wireless Telegraphy, Sir Oliver Lodge, F.R.S., 381; New Wave Detector for Wireless Telegraphy and Telephony, G. E. Petit, 509
Teleology: Design in Nature, Dr. J. Bell Pettigrew, F.R.S., 151
Telephony: Influence of Terminal Apparatus on Telephonic Transmission, Louis Cohen, 18; Constitution of Subterranean Telephone Circuits in Large Towns, M. Devaux-Charbonnel, 29; an Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., Maurice Solomon, 65; Jahrbuch der drahtlosen Telegraphie und Telephonie, Maurice Solomon, 65; New Wave Detector for Wireless Telegraphy and Telephony, G. E. Petit, 509
Telescope, the Surface of Rotating Mercury as a Reflecting, Prof. R. W. Wood, 141
Tempel$_2$-Swift, Observations of Comet, Prof. Barnard, 10; MM. Rambaud and Sy, 79
Temperature of the Upper Atmosphere, Dr. C. Chree, F.R.S., 127, 397; W. H. Dines, F.R.S., 455; Charles J. P. Cave, 456
Temperatures, Upper Air, E. Gold, 217
Temples, the Uses and Dates of Ancient, Sir Norman Lockyer, K.C.B., F.R.S., 340
Termiten oder weissen Ameisen, die, K. Escherich, 245
Terrestrial Magnetism: the Norwegian Aurora Polaris Expedition, 1902–3, Vol. i., on the Cause of Magnetic Storms and the Origin of Terrestrial Magnetism, Kr. Birkeland, 410
Textiles: the Structure of the Wool Fibre and its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, Prof. Walter M. Gardner, 4
Therapeutics: the Treatment of Nævus by Electrolysis and Radium Combined, Fouveau de Courmelles, 480
Thermometers, Charlottenburg Sensitivity Tests of, 49
Thienemann (Dr.), Marked Storks and Swallows, 295
Thiselton-Dyer (Sir W. T.), Experiments with Cyclamen Seedlings, 349
Thomas (H. H.), Petrography of the New Red Sandstone in the West of England, 147
Thompson (Beeby), "Blowing" Wells, 429
Thompson (Prof.), New Method of Plotting Currents from Observations of Drifters, 328
Thompson (Prof. S. P.), Self-demagnetising Factor of Bar Magnets, 87
Thomsen (Prof. Julius), Death and Obituary Notice of, M. M. Pattison Muir, 46
Thomson (Dr. John), Death and Obituary Notice of, 315
Thomson (Mr.), Early Civilisation in Northern Greece, 437
Thonner (Franz), die Blütenpflanzen Afrikas, 333
Thorianite, a Direct Estimate of the Minimum Age of, Hon. R. J. Strutt, F.R.S., 308
Thornton (W. M.), Measurement of Dielectric Constants by the Oscillations of Ellipsoids and Cylinders in a Field of Force, 86
Thornycroft (Sir John I., F.R.S.), Hydroplanes or Skimmers, 107
Thorpe (Dr. T. E., C.B., F.R.S.), Scientific Societies and the Admission of Women Fellows, 67
Thresh (Dr. J. C.), the Water Supply of Kent, with Records of Sinkings and Borings, 432
Thurston (E.), Native Man in Southern India, 257
Tidal Friction and Cosmogony, Scientific Papers, Vol. ii., Sir George Howard Darwin, K.C.B., F.R.S., 421
Tides, Manual of, Rollin A. Harris, 91
Tierkunde, Leitfaden der, für höhere Lehranstalten, K. Smalian, 367
Tierra del Fuego, the Birds of, Richard Crawshay, 155
Timber, J. R. Baterden, 94
Titchener (Prof. E. B.), Lectures on the Elementary Psychology of Feeling and Attention, 245
Tonks (F. J.), Determination of Tungstic Acid in Low-grade Wolfram Ores, 388
Torres Straits, Reports of the Cambridge Anthropological Expedition to, Vol. vi., Sociology, Magic, and Religion of the Eastern Islanders, 9
Tortugas, Marine Biology in the, 382
Toula (Franz), die Acanthicus-Schichten im Randgebirge der Wiener Bucht, 262
Touplain (F.), the Diastases of Milk, 270
Toxicology: the Gypsy Poison Drab, J. Myers, 77; the Poisons of the Pharmacy Act, C. Simmonds, 191; *Strophanthus sarmentosus*, its Pharmacological Action and Use as an Arrow-poison, Sir Thomas Fraser and Dr. A. P. Mackenzie, 328
Toynbee (Captain Henry), Death and Obituary Notice of, 256
Tozer (Rev. Eustace), Method of Mounting Rotifers and Protista in Canada Balsam, 225
Transatlantic Wireless Telegraphy, Commendatore G. Marconi at Royal Institution, 233, 264
Transformers for Single and Multiphase Currents, Prof. Gisbert Kapp, 365
Transpiration, Molecular Effusion and, Martin Knudsen, 491
Trees: a Handbook of Forest-botany for the Woodlands and the Laboratory, Prof. H. Marshall Ward, 126
Trees shown to the Children, Janet Harvey Kelman and C. E. Smith, 192
Trentham (W. H.), Modern Methods of Sewage Disposal, 5
Trillat (M.), Action of Iron on Wine, 150
True (Dr. F. W.), South American Fossil Cetacea, 444
Trypanosomes: Probleme der Protistenkunde, (1) die Trypanosomen ihre Bedeutung für Zoologie, Medizin und Kolonialwirtschaft, Prof. F. Döflein, 489
Tsakalotos (D. E.), Theory of Organic Bases according to the Viscosity of their Solutions, 390
Tschirch (Prof. A.), Handbuch der Pharmakognosie, 3
Tsetse-fly, Another Fossil, Prof. T. D. A. Cockerell, 128
Tuberculosis: Evacuation of Tubercle Bacilli by the Bile in the Intestine in Animals affected with Latent Lesions, A. Calmette and C. Guérin, 89; the Intra-dermo-reaction to Tuberculin in the Treatment of Tuberculosis, Charles Mantoux, 240
Tucker (W. S.), High-potential Primary Battery, 148
Tufts (Prof. F. L.), Death of, 224
Turner (F.), Economic Value of Australian Pasture Grasses, 139
Turner (J. E. C.), Germination of Myrabolan Seedlings, 258
Turner (W.), Roman Metal-work Found at Deep Dale Cave, 198
Turpain (Albert), la Télégraphie sans Fil et les Applications pratiques des Ondes électriques, 65
Turrentine (J. W.), New Electrode for Electrolytic Determination of Metals, 470
Tutton (Dr. A. E. H.), a Wave-length Comparator for Standards of Length, 477; the Use of Wave-length Rulings as Defining Lines on Standards of Length, 478
Twort (F. W.), Influence of Glucosides on Growth of Acid-fast Bacilli, 58
Tyler (Dr. J. M.), Man in the Light of Evolution, 275

Uniformity in Mathematical Notation and Printing, 102
United States: Darwin Celebrations in the, 72; Higher Education in the United States, 112; the United States Naval Observatory, 170; United States Magnetic Tables and Magnetic Charts for 1905, Department of Commerce and Labour, Coast and Geodetic Survey, L. A. Bauer, Dr. C. Chree, F.R.S., 293; Water Power in the United States, 494
Universities: University and Educational Intelligence, 26, 55, 85, 117, 146, 177, 208, 237, 267, 295, 326, 357, 386, 418, 448, 476, 508; Functions of a University, Prof. C. Lloyd Morgan, F.R.S., 176; the Reform of Oxford University, 311; Reform at Cambridge, 345; the New Institute of Physiology at University College, London, 503
Unthank (H. W.), Unusual Condition of Nasal Bones in Sphenodon, 69
Unwin (Rev. P. W.), Practical Solid Geometry, 305
Uranium, the γ Rays of, Frederick Soddy and Alexander S. Russell, 7
Uranium X, the Rays of, Frederick Soddy, 37
Uranium, Production of Radium from, Frederick Soddy, 308
Ursæ Majoris Stars, Common Motions of the Principal, Dr. Ludendorff, 141
Ursæ Majoris, the Variable Star 6.1909, Prof. Wolf, 410

Valdivia Expedition, the, 486
Valency, the Theory of, Dr. J. Newton Friend, 395
Vapour-density and Smell, Dr. E. P. Perman, 369; Dr. Alex. Hill, 427
Variable Stars: Observations of Variable Stars, Prof. Nijland, 142; SS Aurigæ (31.1907) an Irregular Variable, Prof. Hartwig, 288; Variable Star 6.1909, Ursæ Majoris, Prof. Wolf, 410
Vascular System, Lectures on the Evolution of the Filicinean, A. G. Tansley, 391
Vatican Observatory, the, 200
Vegard (L.), Ionisation with γ Rays, 328
Ventilation: Report of the Departmental Committee on Humidity and Ventilation in Cotton-weaving Sheds, 101; Ventilation for Dwellings, Rural Schools and Stables, F. H. King, 127
Vernon (Dr. H. M.), the Production of Prolonged Apnœa in Man, 39
Vertebrate Development, 271
Vertebrates, the Origin of, Dr. Walter Holbrook Gaskell, F.R.S., 301
"Vertebrates," Gaskell's "Origin of," Dr. W. H. Gaskell, F.R.S., 428
Vesuvius, the Eruption of, of April, 1906, Dr. Johnston-Lavis, 289
Vignon (Leo), Colouring and Tinctorial Properties of Picric Acid, 180; Colouring Properties of Lead Chromate, 390; Experiments in Relation to the Theory of Dyeing, 472
Vinci (Leonardo da) and Geography, Prof. Dr. Eugen Oberhummer, 351
Vivisection Controversy, the, Dr. Albert Leffingwell, 63
Voisin (Gabriel), Award of the Osiris Prize to, 499
Volcanoes: Ngauruhoe Volcano, New Zealand, in Eruption, 75; Death and Obituary Notice of Rev. Dr. Sereno E. Bishop, 164; Volcanic Island near Bogloslof, Alaska. Capt. F. M. Munger, 226; the Eruption of Vesuvius of April, 1906, Dr. Johnston-Lavis, 289; the Guatemalan Earthquakes and Eruption of 1902, W. S. Ascoli, 359
Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, Wilhelm Wundt, Rev. A. E. Crawley, 334
Vortices, Hale's Solar, A. Brester, 79
Vulquin (E.), Oxidation of the Polyhydric Alcohols by a Peroxydasic System, 449

Wace (Mr.), Early Civilisation in Northern Greece, 437
Wade (Mr.), a Double-image Cœlostat for Determining the Moon's Position, 468
Wagenen (H. R. Van), Tungsten, 439
Wahl (A.), a New Isomeride of Indigo, 149
Waidner (W.), Melting Point of Platinum, 329
Walcott (Dr. C. D.), Scientific Work of the Smithsonian Institution, 114
Walker (A. O.), Amphipoda Hyperiidea of the *Sealark* Expedition to the Indian Ocean, 269
Walker (Gilbert, F.R.S.), Correlation in Seasonal Variation of Climate, 167
Waller (Dr. A. D.), Effect of Heat upon the Electrical State of Living Tissues, 58
Ward (Prof. H. Marshall), Trees: a Handbook of Forest-botany for the Woodlands and the Laboratory, 126
Ward (John J.), Life-histories of Familiar Plants, 344: the Pollination of the Primrose, 457
Warren (Dr. Ernest), Variability of the Six Castes of South African White-ants or Termites, 264
Washbourn (Dr. J. W.), a Manual of Infectious Diseases, 454
Washington, the Carnegie Institution of, 142
Water Analysis, Laboratory Notes on Industrial, a Survey Course for Engineers, Ellen H. Richards, 215
Water Power in the United States, 494
Water Supply of Kent, the, with Records of Sinkings and Borings, William Whitaker, F.R.S., Dr. H. Franklin Parsons, Dr. H. R. Mill, and Dr. J. C. Thresh, 432
Waterways, American and Canadian, 461
Waterways, Artificial, and Commercial Development (with a History of the Erie Canal), Dr. A. Barton Hepburn, 307
Watson (H. E.), Wave-lengths of Lines in the Secondary Spectrum of Hydrogen, 86
Watson (J. B.), Colour-vision in Monkeys, 435
Wave Motion and Bessel's Functions, Prof. G. H. Bryan, F.R.S., 309
Wehnelt (Dr. A.), Measurement of the Energy of Negative Electrons given out by Metals heated in a Vacuum, 258
Weigall (A. E. P.), the Tomb of Horemheb, Egypt, 437
Weights and Measures: British and American Customary and Metric Legal Measures for Commercial and Technical Purposes, N. Foley, 367
Weiss (Prof. F. E.), Submerged Vegetation of Lake Windermere as affecting the Feeding Grounds of the Fish, 120
Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, Third Report of the, Andrew Balfour, 495
Wellman (Dr. F. Creighton), Angolan Oil-beetles (Meloidæ), 263
Wells, "Blowing," Sydney H. Long, 339; Dr. A. Strahan, 370; Beeby Thompson, 429
Welsh Gorsedd, the, Rev. W. Griffith, 468
Werkstatt grosser Forscher, Aus der, Dr. Friedrich Dannemann, 182
West (W. and G. S.), Fresh-water Algæ from Burma, including a few from Bengal and Madras, 125
West Indies, Cotton Growing in the, West Indian Bulletin, the Journal of the Imperial Agricultural Department for the West Indies, 164
Westell (W. Percival), the Story of the Sea and the Seashore, 129; Animals at Home, 192
Western Teaching for China, Dr. Henry Dyer, 99
Westphal (W.), Properties of Doubly-charged Ions, 287
Whales, Length of Skeletons of Great, F. A. Lucas, 104
Whaling: Hunting the Hump-backed Whale in Natal Waters, H. W. Bell-Marley, 16
Wharton (Rear-Admiral Sir William J. L., K.C.B.), Hydrographical Surveying, 307
Wheat Problem, Some Aspects of the, Dr. E. J. Russell, 282
Wheldale (Miss M.), Anthocyanin, 328
Whiddington (R.), Fatigue Effects of the Kathode in a Discharge Tube, 420
Whitaker (William, F.R.S.), the Water Supply of Kent, with Records of Sinkings and Borings, 432
White (Jean), Ferments and Latent Life of Resting Seeds, 118
White (Sir Wm.), Types of Warships omitted in Recent Programmes of Naval Construction, 172
Wieland (G. R.), *Cycadeoidea etrusca* in Bologna, 261
Wilde Lecture at Manchester Literary and Philosophical Society, the Influence of Moisture on Chemical Change, Dr. H. Brereton Baker, F.R.S., 175
Wilde (Dr. H.), Moving Force of Terrestrial and Celestial Bodies in Relation to the Attraction of Gravitation, 209
Wilder (Prof. B. G.), Brains of Two White Philosophers and of Two Obscure Negroes Compared, 443
Wilkinson (W. Fischer), Valuation of Mining Areas on the Rand, 299
Willey (Dr. Arthur, F.R.S.), Morphology of the Entheropneusta, 218; Forms, Markings, and Attitudes in Animal and Plant Life, 247
Williams (G. B.), Mean Annual Rainfall of Wales and Monmouthshire, 106
Wilson (Prof. H. A., F.R.S.), Statistical Theory of the Form of the Curve of Oscillation for the Radiation Emitted by a Black Body, 57; Attempt to Detect Some Electro-optical Effects, 118; the Electrical Properties of Flame, Lecture at Royal Institution, 143
Wilson (Prof. James), the Scandinavian Origin of the Hornless Cattle of the British Isles, 179
Wilson (J. Gordon), the Nerves of the Atrio-ventricular Bundle, 27
Wilton (David W.), Report on the Scientific Results of the Voyage of the S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, 161
Wimperis (H. E.), the Internal Combustion Engine, 124
Winkler (Dr. Hans), Parthenogenesis und Apogamie im Pflanzenreiche, 61
Winkler (Prof. H.), Vegetative Cross between Nightshade and Tomato, 436

Winnecke's Comet, 1909, Elements and Ephemeris for, Prof. Hillebrand, 502
Winnipeg Meeting, British Association, 159, 432; Prof. Henry E. Armstrong, F.R.S., 159
Winter Retreat, a, Prof. John G. McKendrick, F.R.S., 8
Winter Retreat for Snails, a, W. Hoskyns-Abrahall, 96
Wireless Telegraphy: Long-distance Messages, 14; an Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., Maurice Solomon, 65; la Télégraphie sans Fil et les Applications pratiques des Ondes électriques, Albert Turpain, Maurice Solomon, 65; Jahrbuch der drahtlosen Telegraphie und Telephonie, Maurice Solomon, 65; Transatlantic Wireless Telegraphy, Commendatore G. Marconi at Royal Institution, 233, 264; Selective Wireless Telegraphy, Sir Oliver Lodge, F.R.S., 381; New Wave Detector for Wireless Telegraphy and Telephony, G. E. Petit, 509
Wireless Telephony: an Elementary Manual of Radio-telegraphy and Radio-telephony for Students and Operators, Dr. J. A. Fleming, F.R.S., Maurice Solomon, 65; Jahrbuch der drahtlosen Telegraphie und Telephonie, Maurice Solomon, 65; New Wave-detector for Wireless Telegraphy and Telephony, G. E. Petit, 509
Wolf (Prof.), a New "Cave-nebula" in Cepheus, 19; the Spectra of Various Nebulæ, 19; Spectra of Nebulæ, 229; Recent Observations of Daniel's Comet, 1907*d*, 410; the Variable Star 6.1909, Ursæ Majoris, 410
Wollaston (A. F. R.), Life and Letters of Prof. A. Newton, F.R.S., 8
Women Fellows, Scientific Societies and the Admission of, Dr. T. E. Thorpe, C.B., F.R.S., 67
Wood (Prof. R. W.), the Surface of Rotating Mercury as a Reflecting Telescope, 141; Spectroscopic Researches, 508
Wood (Prof. T. B.), Electrolytes and Colloids, the Physical State of Gluten, 296
Woodward (C. J.), Priestley and Coulomb's Law, 8
Wool Fibre, the Structure of the, and its Relation to the Use of Wool for Technical Purposes, Dr. F. H. Bowman, Prof. Walter M. Gardner, 4
Workman (W. P.), Geometry, Theoretical and Practical, 7
Worlds, the Birth of, Prof. A. W. Bickerton, 380
Wrench (G. T.), the Grammar of Life, 426
Wright (Arthur), the Arthur Wright Electrical Device for Evaluating Formulæ and Solving Equations, 509
Wright (Dr. William), der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg, Otto Schoetensack, 398
Wroczynski (A.), Chemical Reactions in Gaseous Mixtures submitted to very High Pressures, 479
Wundt (Wilhelm), Völkerpsychologie, eine Untersuchung der Entwicklungsgesetze von Sprache, Mythus und Sitte, 334
Wye, Kent, the Journal of the South-Eastern Agricultural College, 170

X-rays, the Absorption of, Dr. C. G. Barkla and C. A. Sadler, 37
X-rays, a Want of Symmetry Shown by Secondary, Prof. W. H. Bragg and J. L. Glasson, 327
X-rays, Transformations of, C. A. Sadler, 327
X-ray Transmission, Phenomena of, C. G. Barkla, 419

Yamanouchi (Dr. S.), Cytology of Fucus, 407
Yeo (Dr. Gerald F., F.R.S.), Death of, 283; Obituary Notice of, 314
Yorke (Dr. W.), Method of Estimating the Total Volume of Blood Contained in the Living Body, 387

Zambonini (Dr. F.), Identity of Guarinite and Hiortdahlite, 178
Zeeman (Prof. P.), Origin of the Colours of the Spectrum, 319
Zehntner (Dr. Leo), Biologia Centrali-Americana, Orthoptera, Vol. i., 241
Zeleny (Prof. John), Phenomenon Connected with the Discharge of Electricity from Pointed Conductors, with a Note by, H. T. Barnes and A. N. Shaw, 297
Zell (Dr. T.), Do Animals take Advantage of Experience?, 317
Zeppelin's (Count) Ascent, May 29, 405
Zijlstra (Dr. V.), Transport of Carbon Dioxide in Leaves, 379
Zimmern (A.), Resonator Sparks, their Spectroscopic Analysis, 149
Zoology: Experimental Zoology, Dr. Hans Przibram, Dr. Francis H. A. Marshall, 2; Zoological Society, 29, 87, 119, 239, 328, 387, 419; the Zoological Position of Tarsius, Prof. G. Elliot Smith, F.R.S., 38; Carpal Vibrissæ and Underlying Structures on Under-surface of Lower Part of Forearm of the Cat, Dr. F. Fritz, 105; a Treatise on Zoology, Part i., Introduction and Protozoa, 152; the Ancestry of the Marsupialia, Prof. Jas. P. Hill, 159; the Writer of the Note, 159; Report on the Scientific Results of the Voyage of S.Y. *Scotia* during the Years 1902, 1903, and 1904, under the Leadership of Dr. William S. Bruce, Vol. iv., Zoology, Part i., Zoological Log, David W. Wilton, Dr. J. H. Harvie Pirie, and R. N. Rudmose Brown, Vol. v., Zoology, Invertebrates, 161; Post-embryonal Development of the Amazonian Manati, Carl Dilg, 166; the Scandinavian Origin of the Hornless Cattle of the British Isles, Prof. James Wilson, 179; Development of the Nemertine Worm *Prosorochmus viviparus*, Dr. W. Salensky, 197; Lehrbuch der Zoologie für Studierende, Dr. J. E. V. Boas, 214; the Intracranial Vascular System of Sphenodon, Prof. A. Dendy, 268–9; a Student's Text-book of Zoology, Prof. Adam Sedgwick, F.R.S., Vol. iii., the Introduction to Arthropoda, the Crustacea and Xiphosura, J. J. Lister, F.R.S., the Insecta and Arachnida, Dr. A. E. Shipley, F.R.S., Prof. G. H. Carpenter, 361; a Treatise on Zoology, Part vii., Third Fascicle, Crustacea, Dr. W. T. Calman, Prof. G. H. Carpenter, 361; Leitfaden der Tierkunde für höhere Lehranstalten, K. Smalian, 367; Anaspidacea, Geoffrey Smith, 435; Economic Zoology, 447; Probleme der Protistenkunde, i., die Trypanosomen ihre Bedeutung für Zoologie, Medizin und Kolonialwirtschaft, Prof. F. E. Döflein, 489; Rats of Calcutta, Captain R. E. Lloyd, 499; Aquarium of the New York Zoological Society, 500